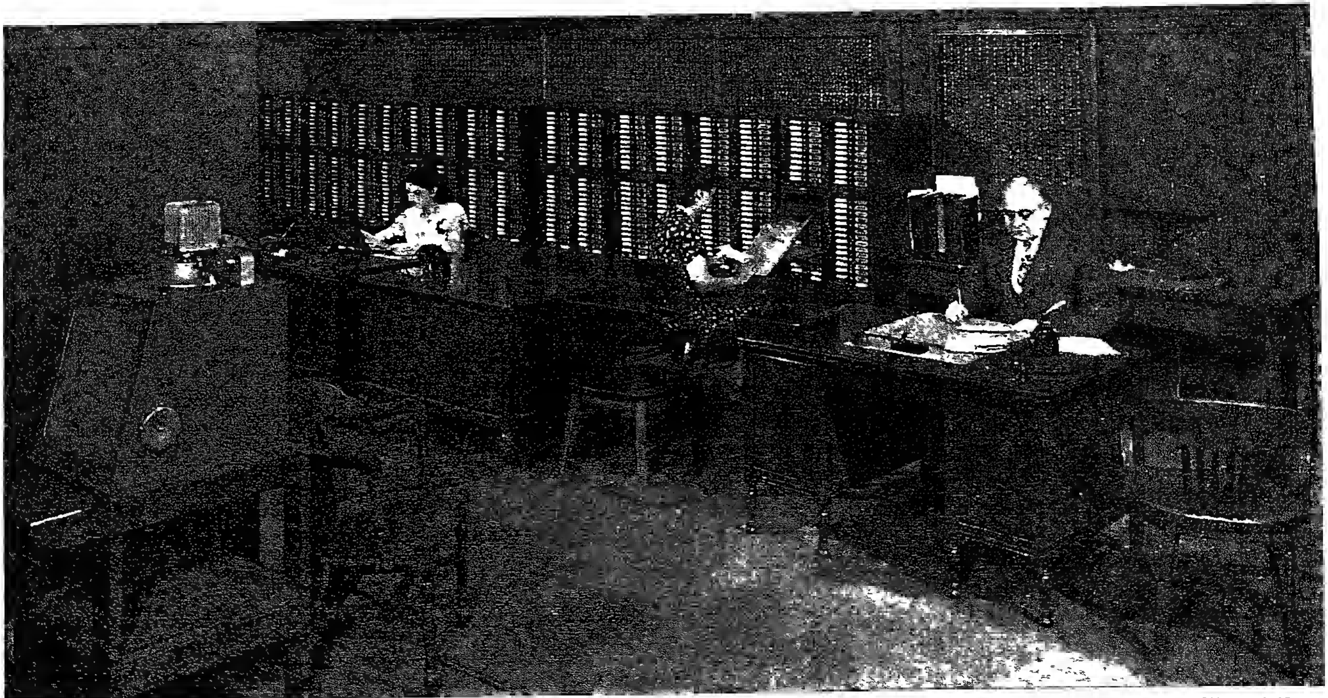

A VIEW OF THE BILLING DEPARTMENT OF THE HIGBEE COMPANY, DEPARTMENT STORE, CLEVELAND

Courtesy of Acme Visible Records, Inc , Chicago

Practical BUSINESS ADMINISTRATION

A Home-Study Course and General Reference Work on Business Correspondence, Office Management, Retail Selling, Sales and Advertising, Production, Economics, Business Law, Accounting, Auditing, Finance, and Statistics

Prepared by a Staff of Accountants, Auditors, Management Engineers, and Specialists in Business Methods and Administration

OVER SEVENTEEN HUNDRED ILLUSTRATIONS, DIAGRAMS, AND CHARTS . . TWELVE VOLUMES

EIGHTH EDITION

1958

AMERICAN TECHNICAL SOCIETY

CHICAGO, U. S. A.

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Chapter 1

ADVANCED ACCOUNTING PROBLEMS

Interpretative Aspects of Accounting. The student who has faithfully pursued the study of the volume on Elementary Accounting has acquired an understanding of the fundamental principles of accounting. These fundamental principles cover such matters as the principles of debit and credit, the analysis of business transactions with a view to their journalization, the construction and use of journals and ledgers, methods of posting, the work sheet, the construction of financial statements (primarily the balance sheet and statement of profit and loss), the use of subordinate ledgers and special journals, accounting treatment of notes and acceptances, and, to a considerable extent, the application of accounting principles to the processes of interpretation with a view to the formulation of business policies and procedures. The primary purpose of the volume on Elementary Accounting is the teaching of accounting principles. A subordinate aspect of this process of giving instruction in principles has been to indicate the application of accounting principles to interpretation; the Elementary Accounting course is not primarily interpretative. The purpose of *this* book, however, is to study the interpretative processes of accounting, using as a background the principles explained and illustrated in the book on Elementary Accounting. The relationship between the two courses may therefore be summarized by stating that the Elementary Accounting course is primarily factual, consisting largely of a statement of principles, whereas the Advanced Accounting course is primarily interpretative, consisting largely of an application of accounting principles to such situations as are likely to arise in practice.

To what extent the student should review the subject matter of the elementary course at this point depends on circumstances. If considerable time has elapsed since the completion of the elemen-

tary course or if, for any reason, there are certain principles therein explained but not as yet well understood, a careful review is recommended. The principles outlined and explained in Elementary Accounting serve as a foundation upon which the superstructure must be erected. Obviously this superstructure will not be satisfactory if the foundation has not been well built.

The Accounting Period. It is desirable at this point to refer to the accounting period because in connection with the accounting period there arise many of the problems in which the basic principles of accounting are involved. The accounting period is the month, the year, or other division of the calendar which it is desirable to use as a basis for recording and interpreting transactions. Accounting is not an exact science. The final result secured by an enterprise is known only after its affairs have been wound up through the liquidation of its assets and the payment of its liabilities. The accounting period is adopted with a view to the determination with approximate accuracy of the results of operations for that period. Whereas the results thus secured are only approximately correct, they are sufficiently accurate to serve as a basis for the guidance of the enterprise. Information, to be of greatest value, must be up-to-date. The sooner dependable information relative to the results of a month's transactions is obtainable, the sooner the changes which such information indicates to be desirable can be effected.

It is evident that in order to record and interpret the transactions and influences of an accounting period of either one month or one year, many accounting principles must be put into effect.

The Interpretative Process. Facts are useful chiefly as aids in interpretation. When the facts are sufficiently detailed and accurate, the resulting conclusions are satisfactory and dependable. When the facts are insufficient, the resulting conclusions are unsatisfactory and undependable. This is notably true where records are kept by single entry, which concerns itself primarily with personal accounts. In general, single-entry accounting is so unsatisfactory that it is not worthy of consideration as a basis for scientific accounting procedure. No modern enterprise would depend on single-entry methods because of the inadequacy of the statements which

could be prepared from its records. Perhaps the factor of primary importance in double-entry accounting is its ability to provide all of the information essential to interpretation. Under double-entry methods, accounts are kept in such a manner as to show clearly the essential information relative to assets, liabilities, and net worth and also information relative to all sources of revenue and all types of expense. The comprehensiveness of double-entry systems guarantees, within certain limits, the accuracy and dependability of the data expressed in the records.

The interpretative process is more than merely one aspect of the analysis and recording of transactions. The analysis of the individual transaction is interpretative, but interpretation in the broader sense refers to the consideration of large groups of transactions already analyzed and recorded. Details reflected in the hundreds of daily transactions must be classified and interpreted at certain intervals, not as details, but as classifications of details. Essentially, therefore, the interpretative process is invoked at the end of the accounting period after all of the detailed transactions of such a period have been recorded and summarized.

Business consists of more than the mere procedure whereby one transaction follows another. Many of the influences which tend to increase or decrease net worth are continuing in character. Thus, if a fire insurance premium is paid up for three years in advance at a cost of $300.00, it is evident that the insurance cost per year is $100.00, and per month, $8.33. If the accounting period is the year, steps must be taken to indicate that the insurance expense is $100.00 for the year. If the accounting period is one month, steps must be taken to show that the insurance expense for that month is $8.33. Similarly, attention must be given to interest expense, interest income, rent expense, and rent income, where payments thereof are made in such manner that to include the entire sum as rent income or rent expense in a given period would distort the facts. To secure the facts relative to interest expense and interest income, or rent expense and rent income, or relative to other similar items of expense and income, it may be necessary to make certain adjustments at the end of the accounting period.

Adjusting Entries. The adjustments referred to above are

accomplished by formulating adjusting journal entries as of the last day of the accounting period. The purpose of these adjusting entries is to bring upon the books the essential facts relative to what are known as accruals and deferred charges. These will be illustrated in connection with: (1) interest, (2) insurance, (3) depreciation, (4) bad debts.

1. *Interest.* Interest represents either expense or income, depending on whether it is incurred on money borrowed or whether it is interest earned on money which is loaned out. Whether interest is earned or incurred, it accrues from day to day at the specified rate. Thus if Jones borrows $1,000.00 for one year at 6 per cent, the interest accrues daily, although its maturity may not occur until the end of the first six months or possibly until the end of the year, depending on the terms of the contract. The interest on $1,000.00 at 6 per cent for one year is $60.00. For one day it is $60.00 ÷ 360 or approximately 17 cents. It may be noted that the 360-day method is used above. This is the method commonly employed in business.

Jones cannot be put to the trouble of paying the interest daily, so it is customary to provide that interest payments be made at specified intervals of time or, where the term of loan is relatively short, at the date of maturity of the loan. Assume that Jones borrows the $1,000.00 on September 1, and that it is stated the maturity date is August 31 of the following year. Assume also that Jones keeps his books on the accrual basis of accounting and that he closes them on December 31. It is evident that on December 31 there has accrued interest for four months in the amount of $20.00 and that before Jones can bring the closing entries upon his books it is necessary for him to make an adjusting entry for this item of interest and possibly for other similar items. This entry is as follows:

Dec. 31		
Interest Expense	*20.00*	
Interest Accrued		*20.00*
Interest accrued on 1,000.00 loan from R. T. Smith dated Sept. 1, 19—		

This entry accomplishes a twofold object because it shows the interest expense applicable to the current year and it also shows the

liability which has been incurred, but which is not yet due, in connection with the interest. When this entry is posted to the ledger, the accounts appear as follows:

Interest Expense		Interest Accrued	
Dec. 31 . . .	*20.00*	*Dec. 31 . . . .*	*20.00*

The Interest Expense account is a nominal account. The Interest Accrued account is a liability account. Like all expense accounts, the Interest Expense account is closed through Profit and Loss account by means of a closing entry. The Interest Accrued account, however, being a real account, is not closed through the Profit and Loss account, but remains open and is shown on the trial balance of the ledger taken after closing the books. The amount of the Interest Accrued is therefore shown in the balance sheet as a current liability.

It is possible to permit this Interest Accrued account to remain open on the ledger until the date is reached when the accrued interest falls due and must be paid. Assuming that Jones contracted to pay the interest semiannually February 28 and August 31, the entry on Jones's books on February 28 for the payment of six months' interest is as follows:

Feb. 28		
Interest Accrued.	*20.00*	
Interest Expense.	*10.00*	
Cash		*30.00*
For semiannual interest payment on loan of 1,000.00.		

Under the plan illustrated, the Interest Accrued account remains open on the books until the actual payment of the interest is made. Next will be illustrated another method which accomplishes the same result and which is preferred by most accountants. As of January 1, what is known as a post-closing entry is made. This consists simply of reversing the debit and credit items of the entry shown which brought upon the books the Interest Expense and Interest Accrued accounts as at December 31. This post-closing entry is as follows:

Jan. 1		
Interest Accrued.	*20.00*	
Interest Expense.		
To reverse adjusting entry of Dec. 37.		

When this method is followed, the ledger accounts appear as follows:

Interest Expense

Dec. 31	20.00	*Dec. 31 to Profit and Loss* .	20.00
		Jan. 1 . . .	20.00

Interest Accrued

Dec. 31	20.00	*Dec. 31* . .	20.00

When the interest payment is made on February 28, the entry on Jones's books is as follows:

Feb. 28		
Interest Expense	30.00	
Cash		30.00
For semiannual payment on loan of 1,000.00.		

2. *Insurance.* When insurance is purchased, it is usually paid for in advance for a period of from one to five years. Its treatment depends on whether it is charged to a Prepaid Insurance account or to an Insurance Expense account. Assuming that the amount paid for the insurance is charged to a Prepaid Insurance account, it is necessary at the end of the accounting period to make an adjustment for the amount of the insurance which has expired. To illustrate, assume that on July 1, $300.00 is paid for fire insurance for a period of three years. If the books are closed on December 31, it is necessary to adjust for one-sixth of the insurance which has expired. This amounts to $50.00, and the adjusting entry is as follows:

Dec. 31		
Insurance Expense	50.00	
Prepaid Insurance		50.00
To carry expired insurance to the Insurance Expense account.		

This leaves a balance of $250.00 in the Prepaid Insurance account. This sum is shown in the balance sheet as an asset.

If the amount paid for the insurance, namely $300.00, is charged to an Insurance Expense account, the procedure is somewhat different. The adjusting entry required transfers the prepaid insurance from the Insurance Expense account to a Prepaid Insurance account, as follows:

Dec. 31		
Prepaid Insurance	250.00	
Insurance Expense		250.00
To adjust for the amount of prepaid insurance.		

After the books are closed, the adjusting entry shown must be reversed in order to bring the amount of the prepaid insurance back into the Insurance Expense account. This post-closing entry is as follows:

Jan. 1		
Insurance Expense	*250.00*	
Prepaid Insurance		*250.00*
To reverse the adjusting entry covering prepaid insurance.		

After this entry has been posted, the ledger accounts appear as follows:

Insurance Expense

July 1	*300.00*	*Dec. 31*	*250.00*
		Profit and Loss	*50.00*
	300.00		*300.00*
Jan. 1	*250.00*		

Prepaid Insurance

Dec. 31	*250.00*	*Jan. 1*	*250.00*

It is apparent that the procedure is simpler when the original amount paid for insurance is charged to the Prepaid Insurance account than when it is charged to an Insurance Expense account. Under the former procedure it is necessary merely to transfer the amount of the expired insurance from the Prepaid Insurance account to an Insurance Expense account, thus leaving the amount of the unexpired insurance in the Prepaid Insurance account. No post-closing entry is required. Under the latter procedure it is necessary to transfer the unexpired insurance to the Prepaid Insurance account and then after the balance in the Insurance Expense account has been closed into the Profit and Loss account, to make a post-closing entry transferring the amount of the Prepaid Insurance from the Prepaid Insurance account to the Insurance Expense account.

3. *Depreciation.* The subject of depreciation is mentioned here only because of the adjustment which must be made for it at the end of the period. The amount of accrued depreciation is computed upon known or estimated data. The essential facts necessary in computing depreciation are: original cost, estimated life, and estimated salvage value. Thus, if a building costing \$100,000.00 has an estimated life of 45 years and an estimated residual value of

$10,000.00, the annual depreciation will be $2,000.00. The adjusting entry at the end of each year is as follows:

Depreciation Expense	*2,000.00*	
Reserve for Depreciation		*2,000.00*
To provide for depreciation on building for one year.		

The Depreciation Expense account is closed into the Profit and Loss account, but the Reserve for Depreciation account is a valuation account and as a rule is deducted from the asset account to which it relates on the balance sheet.

When a fixed asset, for which a Depreciation Reserve account has been provided, is removed from the books, the Reserve is charged with the accumulated depreciation. Assume, in the case of the building mentioned above, that at the end of its life it is sold for $10,000. The entry to record this transaction is as follows:

Cash	*10,000.00*	
Reserve for Depreciation	*90,000.00*	
Building		*100,000.00*
To record sale of building and to charge Reserve for accumulated depreciation.		

Should the building's life amount to more than the original estimate, a credit would be made to Surplus and a charge to the Reserve for Depreciation for the amount of the overcharge made to date to Depreciation Expense. Conversely, a shorter life for the building would require a charge to Surplus and a credit to the Reserve for the necessary additional depreciation.

4. Bad Debts. The procedure required to make provision for estimated uncollectible accounts receivable is essentially the same as that required for depreciation. Having estimated the amount of uncollectible items in Accounts Receivable as at the balance sheet date at say $500.00, the adjusting entry is as follows:

Bad Debts Expense	*500.00*	
Reserve for Bad Debts		*500.00*
To provide for uncollectible accounts receivable.		

The Bad Debts Expense account is closed into the Profit and Loss account. The Reserve for Bad Debts account is a valuation account and is deducted from the Accounts Receivable account in the balance sheet.

When an account is ascertained to be worthless and is to be removed from Accounts Receivable, a journal entry is made charging Reserve for Bad Debts and crediting Accounts Receivable for the amount of the account.

Closing and Post-Closing Entries. The theory and procedure which govern closing and post-closing entries were explained in Elementary Accounting. Their use will be given a brief review at this point. After the books have been properly adjusted, all accounts in the trial balance are either nominal or real. There remain no mixed accounts. The purpose of the closing entries is to transfer all accounts having nominal balances to the Profit and Loss account. Nominal accounts having debit balances, which therefore represent expenses, are closed to the debit side of the Profit and Loss account. Nominal accounts having credit balances represent income and are closed to the credit side of the Profit and Loss account. Finally, the balance of the Profit and Loss account is transferred to the proper net worth account. The proper net worth account in the case of sole proprietorships is the Proprietor's Capital account. In the case of partnerships, the net profit or loss is carried to the partners' Drawing accounts in the profit and loss sharing ratio. In the case of corporations the net profit or loss is carried to the Surplus account.

Post-closing entries are entirely avoided by some accountants, but as a rule the post-closing entry may be used to advantage in connection with certain adjusting entries. This was illustrated in the discussion of interest.

The Working Papers. Sufficient instruction regarding the use of the working papers in the process of closing the books was given in Elementary Accounting to furnish the student with a satisfactory groundwork for the application of its use in more advanced problems. Essentially the working papers method of closing the books consists in starting with the preliminary trial balance of the ledger, entering in the adjustment columns all adjustments and then, with or without showing an adjusted trial balance, carrying all nominal items to the Profit and Loss columns and all real items to the Balance Sheet columns. The advantage of this method of closing the books lies in the fact that the procedure is completed and checked before the adjusting and closing entries are entered in the journal.

The working papers have a variety of applications. They are especially adapted to the solution of problems in which are given a trial balance of the ledger as at the closing date of the accounting period and which the student is required to use as a basis for setting up the adjusting and closing entries and preparing a profit and loss statement and a balance sheet. The working papers are subject to more specialized applications as, for example, in the process of preparing consolidated balance sheets and in preparing statements of funds derived and applied. These and other applications of the working papers will be illustrated later in this text.

Modern Types of Business Organization. In the development of industry and commerce, it is natural that there should occur much experimentation relative to the type of organization best suited to carry out given kinds of enterprise. Much that has been found useful in the United States in this respect has been derived from England. This is natural, since our system of law is based largely on the English common law. Of course, as regards both law and business procedure, it has been necessary to make changes with special reference to conditions in this country. Nevertheless, English industrial history supplies much of the background for the study of the origin and development of the three different types of present-day business organization, which are: (1) sole proprietorship, (2) partnership, (3) corporation.

1. The Sole Proprietorship. A sole proprietorship is a business owned and operated by one person who calls himself the proprietor or owner. Although the sole proprietor has legal title to all the assets employed in his business, there are usually equities in addition to that of the sole proprietor. An equity is an interest of a financial character in an enterprise. If the total assets of a given proprietorship amount to $100,000.00 and the proprietorship or owner's equity amounts to $75,000.00, it is evident that other parties than the proprietor have an interest in the business. The $25,000.00 would ordinarily take the form of debts, either permanent or long-term or both. Although the proprietor owns all assets, he cannot act contrary to the interests of his creditors. If any of his debts bear interest, to avoid foreclosure it must be paid as it falls due. If the debts are permanent in character, he must make arrangements to

liquidate them. Long-term debts must be paid off or renewed at their maturity dates.

The sole proprietorship is naturally the form which the small enterprise takes when it is founded. As time passes, it may be found that some other form of organization will serve better, owing to the growth of the enterprise or to the fact that the proprietor is no longer able to perform alone all the duties of management.

Accounting procedure is essentially the same in all types of organization under our present-day system of capitalism. The essential difference in accounting procedure for the different types of business organization is found in the treatment which must be accorded the proprietorship equity. This proprietorship equity is simplest in the sole proprietorship because but one man is concerned. It naturally involves more complicated problems where there are partners or where the interests of several or many stockholders are concerned, as is the case in corporations.

2. *Partnerships.* It appears that partnerships originated in Italy but took their present form largely through the impetus given by the rise of industrialism in England. In a partnership there are two or more proprietors among whom are distributed the duties of management and to whom are allocated the profits in some specified ratio, or equally if no ratio is specified. Essentially, a partnership is an *association* of individuals. Each partner is subject to the rule of unlimited liability, that is, he may be required to surrender his private fortune for the benefit of the firm's creditors if the firm's assets are not sufficient to meet the firm's debts. By statutory enactment the liability of one or more partners may be limited, but such provisions represent deviations from common law rules.

The partnership form of organization is well fitted for certain kinds of undertakings. Professional men, such as lawyers, doctors, and accountants, who desire to practice under some form of association in order to secure the advantages to be derived from such association, naturally adopt the partnership form of organization. Stock brokerage firms are required to operate as partnerships. Many commercial enterprises employ this form of organization because it appears to have been the natural outgrowth of the sole proprietorship form of organization which preceded it. As a rule,

the number of partners should be limited rather strictly. In a given instance, the adaptability of the partnership form of organization to the requirements should be considered carefully. It is a less formal type of organization than the corporation, and it is not compelled to submit as many reports to state and federal authorities. While routine duties may be delegated to a partner, to perform important matters such as the sale of partnership assets or a change in the character of the business requires the consent of all of the partners.

The accounting problems peculiar to the partnership are those which relate to admission of partners, drawings by partners, interest on partners' investments, division of profits and losses, and dissolution. Later in this chapter, attention will be given to some of these problems.

3. Corporations. The corporation is statutory in origin; nevertheless, corporation law has had an important historical development. Formerly corporations were organized by special acts of state legislatures, but with the growth of industrialism in the United States, it became necessary to enact general corporation laws. Each of the forty-eight states now has such legislation in effect. General corporation laws impose upon the secretary of state the duty of considering applications for charters and issuing such charters when the applications are approved.

From the point of view of accounting, the corporation involves the application of no new principles, but it does involve the application of well-known accounting principles to some situations which do not exist in sole proprietorships and partnerships. The distinguishing feature of the modern corporation, organized for profit, is the capital stock system. This system as it now exists is the result of a long period of development. For example, formerly each stockholder had one vote, but today he has as many votes as he has shares of stock. Formerly all shares of stock possessed a par value, but today capital stock without any par value is common. Essentially a share of capital stock is a unit of ownership in a corporation. This unit is usually a very small fraction of the total proprietorship of the corporation. Thus if the capital stock of the corporation consists of 10,000 shares, each share having a par value of $100.00, the capital-

ization of the corporation is $1,000,000.00, of which each share represents 1/10,000th part, or $100.00. The purpose in thus subdividing the capitalization of the corporation is to make it possible for many persons to own capital stock in a given corporation. Thus in the illustration above, there might be 1,000 stockholders, each holding 10 shares of stock, or there might be 100 stockholders, each holding 100 shares of stock, and so on.

Perhaps the second most distinctive feature of corporation accounting procedure is the Surplus account. The Capital Stock account, even where the capital stock is without par value, should remain credited with the original sum. Profits and losses cannot be carried to the Capital Stock account. The principal purpose of the Surplus account is to take up profits and losses and also to show clearly the disposition ultimately made of profits. Thus it is evident that problems which are peculiar to corporations must be concerned largely with the net worth accounts of corporations, namely, the Capital Stock account and the Surplus account.

Partnership Accounting Problems. Problems relating to partnerships will be considered under three heads, namely: (1) operation, (2) admission of partners, (3) dissolution.

Operations. Under operations there arise certain problems which are peculiar to the partnership form of organization. The principal problems of this type relate to the division of profits and, thereunder, the treatment of partners' salaries. The fundamental rule of common law relative to the division of partnership profits and losses is that losses should be borne equally and profits should be divided equally, regardless of the investments of the partners. Any variation from this rule must be the result of an agreement among the partners. It therefore will be appropriate to consider the basic procedure first and then discuss deviations therefrom.

Illustration 1. Assume that T. Lott, G. Best, and T. Oliver are partners, sharing profits and losses equally since there is no agreement to the contrary. Assume further that on December 31, 19—, the balances shown in the partners' Capital accounts are as follows:

T. Lott, Capital account	*15,000.00*
G. Best, Capital account	*10,000.00*
T. Oliver, Capital account	*5,000.00*

The net profit for the year is shown to be $7,900.00.

The drawings for the year are as follows:

T. Lott..	*1,500 00*
G. Best...	*1,7[illegible] 00*
T. Oliver.	*900 00*

In partnership accounting, due to the fact that the distribution of net profit and net loss must be made to the partners, it is desirable to set up a Profit and Loss Appropriation account. The balance of the Profit and Loss account is carried to the Profit and Loss Appropriation account and then the details relative to the distribution of the profit or loss are clearly shown in the Profit and Loss Appropriation account. In Fig. 1 is shown the Profit and Loss Appropriation account for the firm of Lott, Best, and Oliver for the year ending December 31, 19—.

Profit and Loss Appropriation Account

19—				19—			
Dec.	*31*	*Net Profit carried to Drawing accounts*		*Dec.*	*31*	*Balance brought down........*	*7,900 00*
		Lott 2,633.34					
		Best 2,633.33					
		Oliver 2,633.33	*7,900 00*				
			7,900 00				*7,900 00*

Fig. 1

The Drawing accounts for the three partners are shown in Fig. 2. Note that the net profit of each partner is shown on the credit side of his Drawing account. Note also that on the debit side of each Drawing account are shown the drawings made during the year and the balance of the account which is carried to the partners' Capital account, thus closing the Drawing account.

There is an alternative plan of closing the Profit and Loss account. This consists in carrying each partner's share of the net profit direct to his Capital account and, in turn, closing the balances in the Drawing accounts into the Capital accounts. It is believed, however, that the method illustrated above is ordinarily to be preferred, since it results in a direct comparison between drawings on the one hand and profit on the other hand.

T. Lott, Drawing

19—					19—				
Dec.	31	Drawings	1,500	00	Dec.	31	Net Profit......	2,633	34
		T. Lott, Capital.	1,133	34					
			2,633	34				2,633	34

G. Best, Drawing

19—					19—				
Dec.	31	Drawings.......	1,100	00	Dec.	31	Net Profit......	2,633	33
		G. Best, Capital..	1,533	33					
			2,633	33				2,633	33

T. Oliver, Drawing

19—					19—				
Dec.	31	Drawings.......	900	00	Dec.	31	Net Profit......	2,633	33
		T. Oliver, Capital	1,733	33					
			2,633	33				2,633	33

Fig. 2

Methods of Dividing Profit. As already indicated, the net profit of a firm is divided equally among the partners unless there is an agreement to the contrary. As a rule the subject of division of profits should receive careful consideration at the time the partnership agreement is being prepared, since circumstances usually make it undesirable to apply the common law rule of equal division of profits. The factors which must be taken into consideration in arriving at a just arrangement relative to profit distribution are (*a*) the amount of each partner's investment, and (*b*) the capacity of each partner, as well as the amount of time which he can give to the firm's business. Where inequalities with respect to these two factors exist, it is necessary to devise a plan of profit distribution which will result in the equitable treatment of the members of the firm. Of course the existence of inequalities in the partners' investments does not necessarily mean that the rule of equal division of profits should not apply, because these inequalities may be offset by inequalities in the capacities of the partners or by inequalities in the character of the duties which they are expected to perform. It will be necessary, however, to discuss some of the deviations from the rule of equal division of profits.

1. Ratio of Investments. When the profits are divided in the ratio of the capital investments of the partners it is necessary to specify just what this means, since there are three possible interpretations. As a basis of procedure there might be shown (*a*) the ratio of the capital investments of the partners at the beginning of the accounting period; (*b*) the ratio of the capital investments of the partners at the end of the accounting period; and (*c*) the ratio of the average capital investments for the accounting period. These will be considered next.

a) Where the ratio of the capital investments as at the beginning of the accounting period is chosen as the basis of profit distribution, it is necessary simply to examine the capital accounts of the partners to determine their credit balances. Thus if G. Goddard and R. Morris are partners and, as at January 1, their capital accounts have credit balances of $20,000.00 and $10,000.00, respectively, and if the net profit for the year is $9,000.00, it is evident that this will be distributed $6,000.00 to Goddard and $3,000.00 to Morris. This division of the profits is made without regard to changes which may occur in the capital accounts of the partners during the year and also without regard to the capital investments of the partners at the end of the year.

b) If the ratio of the capital accounts at the end of the period is chosen as a basis for profit division, the procedure is more complicated. It is necessary in this instance to have a definite understanding as to the treatment of partners' drawings. To illustrate: Assume that on January 1, the partners' Capital accounts stand respectively as shown in Fig. 3.

R. Lord	*20,000.00*
P. Easton	*14,000.00*

Fig. 3

Next assume that on July 1, Lord invests an additional $2,000.00 and on August 1 Easton invests an additional $5,000.00. Drawings by Lord amount to $175.00 on June 1, June being the only month in which he exceeds the allowable monthly drawings of $100.00. Easton exceeds this allowance once also on September 1, when he draws $125.00. It is provided in the partnership agreement that

drawings in excess of $100.00 per month shall be charged directly to the Capital account of the partner. Sums not in excess are chargeable to the Drawings accounts. It is further provided that the ratios of the Capital accounts at the end of the year, to be used as a basis for division of profits, shall be determined without reference to the balances in the Drawings accounts. The Capital accounts of the partners therefore stand as in Fig. 4 as at December 31.

R. Lord, Capital

19—					19—				
June	7			75 00	*Jan.*	7			20,000 00
					July	7			2,000 00

P. Easton, Capital

19—					19—				
Sept.	7			25 00	*Jan.*	7			14,000 00
					Aug.	7			5,000 00

Fig. 4

The balance in Lord's Capital account on December 31 is $21,925.00 and the balance in Easton's account, $18,975.00. Consequently, Lord will receive 21,925/40,900 and Easton will receive 18,975/40,900 of the net profit for the year. $40,900 is the sum of $21,925 and $18,975.

2. *Ratio of Average Capital Investments*. It is evident that the balances in the partners' Capital accounts, either at the beginning of the accounting period or at the end of the accounting period, are not exact measures of the relative investments of the partners in the business for that particular accounting period. If strict accuracy in this respect is required, it is necessary to determine the average capital investment of each partner and then to compute the ratios of these investments. These ratios then serve as a basis for the division of the profits. As in the preceding case it will be necessary to have a definite understanding relative to the treatment of drawings, since the average investment of a partner is affected only by the amount of drawings which is charged to his Capital account. Thus if all drawings not in excess of $200.00 monthly are chargeable to Drawings accounts, it is evident that only where a partner exceeds

$200.00 in any month will the computation of his average capital investment be affected.

Two methods of computing the average capital investments of partners will be illustrated. Under the first method each investment is multiplied by the number of days it is used in the partnership business. Debits to Capital accounts are treated as offsets to credits. It is necessary to determine the number of days from the date the investment is made (if a credit), or from the date of the deduction (if a debit), to the end of the accounting period. Fig. 5 illustrates the procedure under the first method. First, the credits and debits to A's and B's Capital accounts, respectively, together with the dates are shown. Next, the number of days the investment (if a credit) or the deduction (if a debit) is effective are given. Next, the investments and the deductions are multiplied by the number of days to secure the amounts shown in the "Amount × Days" column. In the next column the totals of debits and credits are shown, and the last column gives the differences.

First Method

	Date	Amount	Days to Dec. 31	Amount ×Days	Totals	Differences
A's Capital:						
Credits:	*Jan. 1*	*20,000*	*365*	*7,300,000*		
	Aug. 15	*5,000*	*138*	*690,000*	*7,990,000*	
Debits:	*Feb. 28*	*50*	*306*	*15,300*		
	June 2	*125*	*212*	*26,500*		
	Sept. 4	*250*	*118*	*29,500*	*71,300*	*7,918,700*
B's Capital:						
Credits:	*Jan. 1*	*18,000*	*365*	*6,570,000*		
	June 15	*2,000*	*199*	*398,000*	*6,968,000*	
Debits:	*Apr. 1*	*150*	*275*	*41,250*		
	Oct. 15	*175*	*77*	*13,475*	*54,725*	*6,913,275*
						14,831,975

Fig. 5

Under the second method the same result is accomplished as under the first method, but by a somewhat different procedure. The balance in the Capital account of each partner is computed and each balance is multiplied by the number of days that it remains unchanged. This procedure is followed for the accounting period. The computations illustrating this method are shown in

Fig. 6, the data being the same as that used in illustrating the first method, in Fig. 5.

Second Method

	Date	Debits	Credits	Balance	Days Unchanged	Products
A's Capital:	*Jan. 1*		*20,000*	*20,000*	*59*	*1,180,000*
	Feb. 28	*50*		*19,950*	*94*	*1,875,300*
	June 2	*125*		*19,825*	*74*	*1,467,050*
	Aug. 15		*5,000*	*24,825*	*20*	*496,500*
	Sept. 4	*250*		*24,575*	*118*	*2,899,850*
					365	*7,918,700*
B's Capital:	*Jan. 1*		*18,000*	*18,000*	*90*	*1,620,000*
	Apr. 1	*150*		*17,850*	*76*	*1,356,600*
	June 15		*2,000*	*19,850*	*122*	*2,421,700*
	Oct. 15	*175*		*19,675*	*77*	*1,514,975*
					365	*6,913,275*

Fig. 6

To find the average investment of a partner for the year, under either method the sums shown in the Differences or Products columns are divided by 365; thus A's average investment is \$7,918,700.00 divided by 365, which amounts to \$21,695.06. B's average investment is found by dividing \$6,913,275.00 by 365, which amounts to \$18,940.48.

3. Arbitrary Ratio. The profit and loss sharing ratio is said to be arbitrary where it is fixed without specific reference to such factors as invested capital. It is usually arrived at by the partners by taking into consideration all relevant facts, but without giving specific weight to any of them. Thus, if Atkins and Johnson form a partnership and conclude that, in view of essential facts, Atkins should receive two-fifths of the profits and bear two-fifths of the losses, and Johnson should receive three-fifths of the profits and bear three-fifths of the losses, such an arrangement is evidently arbitrary. Sometimes, it is agreed to divide a portion of the profits in one way and the balance thereof in some other way. Thus A and B might agree to allow 6 per cent interest on their invested capitals and then divide the remainder of the profits in the ratio of 3 to 2.

Assume that A and B, partners, have average capital investments for the year of \$12,000.00 and \$16,000.00, respectively, that

the net profits for the year amount to $7,000.00 and that after allowing 6 per cent interest on the average investments of the partners the balance is to be divided three-eighths to A and five-eighths to B. In Fig. 7, the distribution of the profit is shown.

A and B

DISTRIBUTION OF PROFITS

Year Ended December 31, 19—

	A	B	Totals
6 per cent on 12,000.00	*720.00*		*720.00*
6 per cent on 16,000.00		*960.00*	*960.00*
Balance of profit is 5,320.00:			
3/8×5,320.00	*1,995.00*		*1,995.00*
5/8×5,320.00		*3,325.00*	*3,325.00*
	2,715.00	*4,285.00*	*7,000.00*

Fig. 7

Interest on Invested Capital. In Fig. 7, interest on invested capital was allowed, after which remaining profits were divided in an agreed ratio. The problem of interest as a means of profit distribution deserves further consideration. If invested capital is the primary factor in producing profit, it appears that the ratio of the partners' investments might properly be regarded as the ratio in which profits should be distributed. When, however, there are other important factors to be considered, such as the capacities of the partners, it appears to be more equitable to allow a reasonable return on invested capital and then distribute the remaining profit, if any, in a ratio which will make allowance for the capacities of the partners, and the amount of time each devotes to the enterprise. In this connection it must be remembered that interest allowed on partners' investments is not an expense but simply a charge against net profit.

If interest is allowed on the partners' investments, it should be agreed upon in advance whether the basis of computation shall be the opening balances in partners' Capital accounts, the closing balances, or the average capital investments for the period.

Since interest on capital represents, not expense, but profit distribution, it should be shown as a charge not to the Profit and Loss account but to the Profit and Loss Appropriation account. The procedure is illustrated in Figs. 8 and 9.

a) The opening balances for the year in the Capital accounts of A and B are $15,000.00 and $10,000.00, respectively. It is agreed that interest at 5 per cent shall be allowed to the partners on the opening balances of the capital accounts. The net profit for the year is $4,700.00. Based on these facts, the appropriation section of the Profit and Loss account appears as shown in Fig. 8, assuming that after interest is deducted the remaining profit is divided equally.

Profit and Loss Appropriation Account

Interest on Capital:			*Balance brought down.........*	*4,700.00*
A...............	*750.00*			
B...............	*500.00*	*1,250.00*		
Net Profit carried to Drawing accounts:				
A ½...................		*1,725.00*		
B ½...................		*1,725.00*		
		4,700.00		*4,700.00*

Fig. 8

b) Assuming that the closing balances of A and B are $9,000.00 and $6,000.00, respectively, that the net profit for the year is $5,000.00, and that interest at the rate of 7 per cent is allowed on the closing balances of the partners' Capital accounts, the appropriation section of the Profit and Loss account appears as shown in Fig. 9, if profit remaining, after interest is deducted, is divided three-fifths to A and two-fifths to B.

Profit and Loss Appropriation Account

Interest on Capital:			*Balance brought down.........*	*5,000.00*
A...............	*630.00*			
B...............	*420.00*	*1,050.00*		
Net Profit carried to Drawing accounts:				
A 3–5..................		*2,370.00*		
B 2–5..................		*1,580.00*		
		5,000.00		*5,000.00*

Fig. 9

As indicated, the interest allowed on the partners' investments is not a true interest expense, and for that reason must be charged, not in the Profit and Loss account proper, but in the appropriation

section of the Profit and Loss account. This is simply a means of arriving at an equitable division of profits. Other methods of accomplishing practically the same result are available. It is not even necessary that the interest allowance be called interest. It can be employed as a means of adjusting profit only when it is provided for in the partnership agreement or when all of the partners agree to employ it. Interest on partners' investments should be distinguished from interest on loans made to the firm by partners. Such loans are bona fide debts, the interest allowed thereon is an expense and should be carried to the expense section of the Profit and Loss account, not to the appropriation section of the Profit and Loss account.

Interest on Drawings. Interest on drawings made during the year by partners is charged only in the event of an agreement to that effect. A frequent arrangement is to provide that interest shall be charged on drawings in excess of a specified amount. Whatever the arrangement may be, it is strictly one of convenience as regards the partners, and like interest on investments amounts simply to a different divison of net profit than would result were no interest charged on the drawings.

To illustrate, suppose that A and B are partners and that there is an agreement to the effect that interest at 7 per cent on drawings in excess of $1,200.00 yearly shall be charged to the partners. Assume that A's drawings for the year amount to $1,100.00 but that on December 1, B draws $100.00 in excess of the $1,200.00 allowance. The interest on $100.00 for one month at 7 per cent is 58 cents. The entry to provide for this is as follows:

B, Drawings	*0.58*	
Interest Income		*0.58*
For interest on B's excess drawings.		

Since this interest is a profit adjustment, the credit to interest income should be carried to the appropriation section of the Profit and Loss account. If it is carried to the Profit and Loss account proper, it results in an overstatement of net profit.

Partners' Salaries. Sometimes one or more of the partners are paid a salary because of the duties which they are required to perform. At first thought, such salary payments are likely to be regarded as expenses. Consideration of the true character of the

partnership form of organization leads to the conclusion that salaries paid partners are invariably a distribution of profit, not a true expense, regardless of the way in which they are charged in the accounts.

Thus, assume that A and B are partners and that it is agreed to pay A a salary of $4,000 yearly because he serves as the manager of the firm's business, and assume also that the net profit before paying such salary is $12,000.00. It is evident that since A and B own the business, the true net profit is $12,000.00, not $8,000.00. In effect, $4,000.00 of the $12,000.00 is paid to A, after which the balance of the net profit, $8,000.00, is distributed in whatever ratio may be agreed on.

Salaries paid to employees are in a different category. The employees are not proprietors and receive no share of the profit. Partners, on the other hand, contribute their investments and their efforts. For these the sole remuneration is the net profit they are able to make. If, in a given instance, there is no net profit from which a partner's salary can be paid, it is in effect a charge to the Drawing accounts of the partners. A partner can expect no reward beyond his share of the net profit. A salary paid to one partner is simply a modification of the profit and loss sharing arrangement. A salary paid to a partner takes from the business either (*a*) profits, or (*b*) capital.

Notwithstanding the foregoing statement of the theory governing partners' salaries there may occur instances in which it is desirable to treat partners' salaries as expense. Thus for purposes of comparing costs of production it is necessary to place partnerships and corporations on a comparable basis. Evidently this can be done only when salaries paid partners are regarded as being of the same character as salaries paid corporate managers.

Relative to the accounting treatment of partners' salaries, they may be paid in cash or they may be credited periodically to the Drawing accounts of the partners concerned. In practice, partners are in the habit of drawing as they require funds for their use, the amounts of their drawings being charged to their Drawing accounts. It is therefore not incorrect to regard such drawings as the equivalent of salaries. It is then possible to make no entry for the

salaries until the end of the year, when the year's salary may be credited in one sum to the proper Drawing account. Strict adherence to theory would require that the charge be made to the appropriation section of the Profit and Loss account. Assume that in the firm of A and B, A receives a salary of $4,000.00. The entry under this procedure would be:

Dec. 31, 19—		
Profit and Loss—Appropriation Section	*4,000.00*	
A, Drawing account		*4,000.00*
To credit A's Drawing account for year's salary.		

Chapter 2

ADVANCED ACCOUNTING PROBLEMS

(Continued)

Admission of Partners. For one reason or another it may be desirable to admit into an existing firm one or more additional partners. With the admission or the retirement of a partner, there is effected the legal result of termination of the old partnership and the formation of a new one. From the point of view of business procedure, this may not mean any noticeable change because business transactions are carried on the same as before and in the same volume. However, certain problems arise in connection with the admission of a new partner. It is impossible to consider here all of the variations which occur in practice in this connection. It is possible, however, to consider some of the fundamental principles which are involved in the great variety of practical cases that may arise.

It is evident that, ordinarily, a new partner will be admitted to a firm only upon the payment of money, either to the firm or to one of the existing partners personally. In other words, the incoming partner may purchase his interest from an existing partner or he may create a new equity in the firm by investing his money in the firm's business. When the incoming partner purchases a part or all of an existing partner's interest, the transaction is primarily between two partners, although it cannot be consummated without the permission of all the partners. To illustrate, assume that A, B, and C are partners, having investments of \$5,000.00, \$9,000.00, and \$15,000.00, respectively. Assume, further, that D desires to become a partner by purchasing a part of B's interest in the firm. It is evident that whereas the permission of A and C is necessary for the carrying out of such a plan, the amount which D must pay to B for one-third of his interest is a matter to be settled between B and D personally. This amount might be \$3,000.00 or it might be \$5,000.00,

depending on what valuation B places on the business. The only entry required on the firm's books would be to debit B, Capital account, and credit D, Capital account, as follows:

May 1, 19—		
B, Capital account	*3,000.00*	
D, Capital account		*3,000.00*
For transfer of one-third of B's investment to D, settlement therefor having been made between B and D personally.		

In order to illustrate some of the basic principles involved in the admission of new partners, a series of cases, each involving a different situation, will be given.

Case 1: New Partner Pays Cash to Firm. A and B are partners having a balance sheet at a given date as shown in Fig. 10.

A and B

BALANCE SHEET

Sundry Assets	$20,000.00	Creditors	$ 4,000.00
		A, Capital	6,000.00
		B, Capital	10,000.00
	$20,000.00		$20,000.00

Fig. 10

It is decided to admit C as a third partner upon his investment of $9,000.00 in the firm. The entry to admit C is:

Cash	*9,000.00*	
C, Capital		*9,000.00*
To admit C as a partner.		

The balance sheet of the firm after C's admission as a partner is as shown in Fig. 11.

A, B, and C

BALANCE SHEET

Sundry Assets	$29,000.00	Creditors	$ 4,000.00
		A, Capital	6,000.00
		B, Capital	10,000.00
		C, Capital	9,000.00
	$29,000.00		$29,000.00

Fig. 11

Case 2: Personal Settlement between Old and New Partners. A and B are partners, their investments being respectively $10,000.00 and $20,000.00. B, with A's permission, sells one-half of his interest in the firm to C. The amount which C agrees to pay to B is $15,000.00, but this is of no particular concern to the partnership. Before the transaction occurs the balance sheet is as shown in Fig. 12.

A and B

Balance Sheet

Sundry Assets	$35,000.00	Creditors	$ 5,000.00
		A, Capital	10,000.00
		B, Capital	20,000.00
	$35,000.00		$35,000.00

Fig. 12

Upon information to the effect that C has settled with B, personally, for one-half of B's interest in the firm, the following entry is required:

B, Capital	*10,000.00*	
C, Capital		*10,000.00*
To transfer to C one-half of B's interest, the settlement between B and C being arrived at through the payment of 15,000.00 by C to B, personally.		

The balance sheet now stands as shown in Fig. 13.

A, B, and C

Balance Sheet

Sundry Assets	$35,000.00	Creditors	$ 5,000.00
		A, Capital	10,000.00
		B, Capital	10,000.00
		C, Capital	10,000.00
	$35,000.00		$35,000.00

Fig. 13

Case 3: Valuation of Assets. Whenever the admission or the retirement of a partner is being considered, there is likely to arise the problem of valuation, not only of tangible assets, but frequently of intangible assets and particularly of goodwill. The reason for this is that after a concern has been in operation for a period of years the

original cost less accrued depreciation may not be a fair measure of the value of the fixed assets. Moreover, conditions not anticipated when the enterprise was established may now exist, and these may be favorable or unfavorable. For instance, changing demands on the part of the public and shifts in the population may be advantageous or disadvantageous. Moreover, the effect of management on the fair value of the enterprise in its entirety must not be overlooked. It is in this connection that there arises the problem of intangible values, usually treated under the head of goodwill. If the management has been good, there almost inevitably results the addition to a well-seasoned enterprise of an element of goodwill, valuable because it results in larger profits than would otherwise be earned.

Illustration 1. Frequently, in the organization of a partnership, or in the admission of an additional partner, assets other than cash are contributed. This naturally gives rise to a problem in valuation, since it is necessary to have the assets other than cash valued at a figure which will result in the equitable treatment of all parties concerned. Assume that A and B are sole proprietors and that they agree to form a partnership by contributing to the new firm all of their assets, and in turn having all their liabilities assumed by the new firm. Before the merger of the two enterprises the balance sheets appear as shown in Fig. 14.

A

BALANCE SHEET

Cash	$ 4,000.00	Creditors	$ 7,000.00
Inventory	9,000.00	A, Capital	24,000.00
Building	12,000.00		
Goodwill	6,000.00		
	$31,000.00		$31,000.00

B

BALANCE SHEET

Cash	$ 2,000.00	Creditors	$ 2,000.00
Inventory	4,000.00	B, Capital	7,100.00
Accounts Receivable	1,500.00		
Delivery Equipment	1,600.00		
	$ 9,100.00		$ 9,100.00

Fig. 14

Since these balance sheets are merely a reflection of the values of the assets as listed on the books of A and B, it may be necessary to make some adjustments in them. On the other hand, the values in them may be found acceptable. In this instance, the entries upon the partnership books will be as follows:

Cash	*4,000.00*	
Inventory	*9,000.00*	
Building	*12,000.00*	
Goodwill	*6,000.00*	
Creditors		*7,000.00*
A, Capital		*24,000.00*
For A's investment in firm of A and B.		
Cash	*2,000.00*	
Inventory	*4,000.00*	
Accounts Receivable	*1,500.00*	
Delivery Equipment	*1,600.00*	
Creditors		*2,000.00*
B, Capital		*7,100.00*
For B's investment in firm of A and B.		

If the books of either of the sole proprietors are in condition suitable for use by the firm, they might be continued in operation. If so, it would be necessary to make only one of the foregoing entries. This entry would be made to bring upon the books to be continued in use the assets, liabilities, and net worth of the partner whose books are to be discontinued.

Illustration 2. Frequently a new partner is admitted to an existing firm. This procedure may necessitate a revaluation of the assets of the firm. It may also necessitate a revaluation of assets contributed by the new partner, if other than cash. To illustrate: Assume that A and B are partners and that their profit and loss sharing ratio is five to three. They decide to admit C as a third partner, upon his investment of $6,000.00 and upon his payment of $1,000.00 to cover one-fifth of the existing goodwill. Before the admission of C, the balance sheet of A and B is as shown in Fig. 15.

A and B

Balance Sheet

Sundry Assets	$15,000.00	Creditors	$ 2,000.00
		A, Capital	7,000.00
		B, Capital	6,000.00
	$15,000.00		$15,000.00

Fig. 15

The entry to admit C is as follows:

Cash	*7,000.00*	
C, Capital		*6,000.00*
A, Capital		*625.00*
B, Capital		*375.00*
To record C's investment of 7,000.00, of which 1,000.00 is payment for goodwill, and is credited to A's and B's Capital accounts in the profit and loss sharing ratio, 5 to 3.		

After this entry is posted, the balance sheet appears as shown in Fig. 16.

A, B, and C

BALANCE SHEET

Sundry Assets	$22,000.00	Creditors	$ 2,000.00
		A, Capital	7,625.00
		B, Capital	6,375.00
		C, Capital	6,000.00
	$22,000.00		$22,000.00

Fig. 16

Illustration 3. In the preceding illustration $1,000.00 was paid by the incoming partner for the goodwill, but the goodwill was not reflected in the ledger accounts. Sometimes no payment is made by the incoming partner for goodwill, but instead a Goodwill account is brought upon the partnership books before the partner is admitted, in order to create a different ratio of investments, as shown in the Capital accounts, than would otherwise be the case. The result is to give the existing partners an investment larger in proportion than that of the new partner. To illustrate: Assume that the balance sheet of A and B, before any adjustment is made for goodwill, is as shown in Fig. 17.

A and B

BALANCE SHEET

Sundry Assets	$14,000.00	Accounts Payable	$ 4,000.00
		A, Capital	6,000.00
		B, Capital	4,000.00
	$14,000.00		$14,000.00

Fig. 17

Assume that the profit and loss sharing ratio is three to two, and that it is agreed to bring \$5,000.00 goodwill on the books. The entry to accomplish this is:

Goodwill	*5,000.00*	
A, Capital		*3,000 00*
B, Capital		*2,000.00*
To bring goodwill on books, the credit therefor being carried to the partners' Capital accounts in the profit and loss sharing ratio.		

It is now in order to make the entry for C's admission, his investment being \$7,000.00. The entry is:

Cash	*7,000.00*	
C, Capital		*7,000.00*
To admit C as a partner in the firm of A, B, and C.		

The balance sheet now appears as in Fig. 18.

A, B, and C

BALANCE SHEET

Sundry Assets	\$26,000.00	Accounts Payable	\$ 4,000.00
		A, Capital	9,000.00
		B, Capital	6,000.00
		C, Capital	7,000.00
	\$26,000.00		\$26,000.00

Fig. 18

Relative to the Goodwill account brought upon the books through the foregoing entry, it appears that the most conservative treatment is to write it off at once against the partners' Capital accounts in the profit and loss sharing ratio. Assuming this ratio to be 4–2–3 for A, B, and C, respectively, the entry required to cancel the goodwill is as follows:

A, Capital	*2,222.22*	
B, Capital	*1,111.11*	
C, Capital	*1,666.67*	
Goodwill		*5,000.00*
To write off goodwill.		

To write off goodwill. After this entry has been posted, the balance sheet appears as in Fig. 19.

A, B, and C

BALANCE SHEET

Sundry Assets..........	$21,000.00	Accounts Payable........	$ 4,000.00
		A, Capital	6,777.78
		B, Capital	4,888.89
		C, Capital	5,333.33
	$21,000.00		$21,000.00

Fig. 19

A somewhat different method of procedure where goodwill is involved is illustrated in the following problem and solution thereto.

A and B are partners, sharing profits and losses equally. A's capital is $6,000.00. B's capital is $8,000.00. They admit C as a partner with a one-third interest in the business for $8,000.00 (*a*) where the amount paid by C remains in the business, and (*b*) where it is paid to A and B, personally, and the $8,000.00 is to be distributed to A and B in the ratio of their investment before C's admission, thus preserving that ratio.

Solution to (*a*):

	A	B	C	Total
Capitals of A and B................	*6,000.00*	*8,000.00*		*14,000.00*
Goodwill to A and B................	*333.34*	*333.33*	*666.67*	
C's Investment			*8,000.00*	*8,000.00*
	6,333.34	*8,333.33*	*7,333.33*	*22,000.00*

Solution to (*b*):

	A	B	C	Total
Capitals of A and B................	*6,000.00*	*8,000.00*		*14,000.00*
C's investment			*8,000.00*	
Goodwill to A and to B............	*1,666.66*	*1,666.67*	*3,333.33*	
	7,666.66	*9,666.67*	*4,666.67*	
Drawn by A and B................	*3,428.56*	*4,571.44*		
	4,238.10	*5,095.23*	*4,666.67*	*14,000.00*

Partnership Dissolution. Partnerships are dissolved in three ways, namely: (1) by act of the parties, (2) by operation of law, (3) by judicial decree.

The partners may, at any time, terminate the partnership by agreement made mutually to that effect. The termination of a partnership does not necessarily mean its dissolution, since it is

possible to have its business affairs carried on by a new partnership, or by a corporation. Thus the withdrawal of a partner results in the technical termination of the partnership, but the remaining partners may continue the enterprise as a new partnership. Death, bankruptcy or insolvency of a partner results in the termination of the partnership by operation of law. Insanity of a partner has the same effect in some states. Commission of a criminal or other illegal act usually results in the termination of the partnership by operation of law. Courts may order the dissolution of a partnership where it is shown that one of the partners has been guilty of defrauding the other partners. Similarly, the court may dissolve a partnership where it is found to be impossible to continue the affairs of the partnership harmoniously.

The usual problem in the event of dissolution consists in the liquidation of the assets. It is almost inevitable that this procedure will result in considerable loss because of the difficulty usually experienced in disposing of fixed assets. The cash thus received, together with that on hand at the time liquidation was begun, is used to meet the claims of various interested parties. The order in which these claims must be paid is as follows: (1) creditors, (2) loans from partners, (3) capital of partners.

Loans from partners are properly regarded as debts, although subordinate to debts due to ordinary creditors. Of course, if there exists a deficiency in one partner's Capital account, any amount which he has loaned to the firm may be employed to cancel such deficiency. A deficiency ordinarily would be a debit balance in a partner's Capital account, but if the partners have agreed to maintain certain minimum credit balances in their Capital accounts, a deficiency would result when the credit balance in one of the Capital accounts falls below the minimum amount which a partner agrees to maintain.

It is usually necessary, after paying off creditors and loans from partners, to pay off the partners' investments in installments because of the impossibility of the immediate liquidation of all the assets and because of the undesirability of retaining a large balance of cash. In carrying out this procedure the liquidator must exercise care not to repay any partner to such an extent that he, the liquida-

tor, might be compelled to make good personally to those partners who, as a consequence, are underpaid.

Accounting Procedure for Dissolution. As a rule, the accounting for the liquidation of a firm's assets should begin by making a transfer of the assets to be liquidated to a Realization account. By doing so, the fact that such assets are to be liquidated is emphasized and the procedure much simplified, since, as the assets are realized on, the credits are carried to the Realization account. Since the assets which are to be sold, or have been sold, appear on the debit side of the Realization account, while the amounts for which they are disposed of appear on the credit side of the Realization account, the account itself serves as a kind of Profit and Loss account. The details expressed therein should be sufficient to make possible the comparison of book values of particular assets with the amount realized thereon in the process of liquidation. The Realization account is a Profit and Loss account in that it records profits and losses on the sales of capital assets. After all assets have been realized on, the balance of the account represents loss or gain on realization, as the case may be. This loss or gain will be distributed to the partners in the profit and loss sharing ratio. The realization of the assets results in debits to the Cash account for the amounts received. This cash is used in turn to pay the claims in the order already explained. When all assets (other than Cash) have been liquidated and all losses or gains included in connection with the liquidation process have been carried to the partners' Capital accounts, the final entry consists in debiting these Capital accounts and crediting Cash.

Illustration 1. A, B, and C are partners, their profit and loss sharing ratio being 3–2–1. They decide to dissolve; the balance sheet shown in Fig. 20 indicates the financial status of the firm as of a given date.

A, B, and C

Balance Sheet

Cash..................	$ 1,100.00	Accounts Payable........	$12,000.00
Accounts Receivable.....	8,200.00	A, Loan Account........	1,700.00
Merchandise............	9,000.00	A, Capital Account......	7,000.00
Investments............	1,700.00	B, Capital Account......	4,000.00
Plant..................	7,700.00	C, Capital Account......	3,000.00
	$27,700.00		$27,700.00

Fig. 20

The following amounts are realized upon the liquidation of the assets:

1. *Accounts Receivable*	8,000.00
2. *Merchandise*	8,200.00
3. *Investments*	7,800.00
4. *Plant*	6,000.00

The Realization account to record these transactions relative to the sale of the assets is shown in Fig. 21.

Realization Account

Accounts Receivable	8,200.00	*By Cash:*		
Merchandise	9,000.00	*Accounts Receivable*		8,000.00
Investments	7,700.00	*Merchandise*		8,200.00
Plant	7,700.00	*Investments*		7,800.00
		Plant		6,000.00
		Loss on Realization:		
		A ½	1,300.00	
		B ⅓	866.67	
		C ⅙	433.33	2,600.00
	26,600.00			26,600.00

Fig. 21

The Cash account appears as shown below, after creditors and partners' loans are paid.

Cash

Balance	1,100.00	*Accounts Payable*	12,000.00
Realization Account	24,000.00	*A, Loan Account*	1,700.00
		Balance	11,400.00
	25,100.00		25,100.00
Balance	11,400.00		

The Cash account and the Capital accounts of the partners are the only accounts now remaining open. The Capital accounts of the partners appear as follows:

A, Capital Account

Loss on Realization	1,300.00	*Balance*	7,000.00
Balance	5,700.00		
	7,000.00		7,000.00
		Balance	5,700.00

B, Capital Account

Loss on Realization	866.67	*Balance*	4,000.00
Balance	3,133.33		
	4,000.00		4,000.00
		Balance	3,133.33

C, Capital Account

Loss on Realization	433.33	*Balance*	3,000.00
Balance	2,566.67		
	3,000.00		3,000.00
		Balance	2,566.67

The balance in the Cash account equals the sum of the credit balances in the partners' Capital accounts. After this balance of cash is used to pay the amounts owing to the partners, the Capital accounts and the Cash account appear as follows:

A, Capital Account

Cash	5,700.00	*Balance*	5,700.00

B, Capital Account

Cash	3,133.33	*Balance*	3,133.33

C, Capital Account

Cash	2,566.67	*Balance*	2,566.67

Cash

Balance	11,400.00	*A, Capital*	5,700.00
		B, Capital	3,133.33
		C, Capital	2,566.67
	11,400.00		11,400.00

Interim Payments in Dissolution. The complete liquidation of the assets of a firm may be accomplished only after a considerable length of time. When this is the case, it is sometimes desirable to make one or more interim payments to the partners. In doing so,

care must be exercised not to overpay any partners. If such overpayment should occur, it might be impossible for the liquidator to recover the amount of the overpayment. He would thus be rendered personally liable to the other partners. In order to avoid the possibility of overpayment of a partner's share it is necessary to assume, at the time when an interim payment is made, that a total loss may occur in connection with the assets not yet liquidated.

Illustration 1. A, B, and C are partners. They present a balance sheet as of a given date as shown in Fig. 22.

A, B, and C

BALANCE SHEET

Assets	$35,000.00	A, Capital	$15,000.00
		B, Capital	13,000.00
		C, Capital	7,000.00
	$35,000.00		$35,000.00

Fig. 22

After the process of liquidation continues for two months there is on hand $18,000.00 cash. Therefore the greatest possible loss is $17,000.00. The profit and loss sharing ratio is 3–2–1. Consequently the possible loss of $17,000.00 would be borne as follows:

A (one-half)	*8,500.00*
B (one-third)	*5,666.67*
C (one-sixth)	*2,833.33*
	17,000.00

After the distribution of these possible losses to the Capital accounts of the partners, these accounts stand as shown below:

A:	*15,000.00—8,500.00=*	*6,500.00 paid to A*
B:	*13,000.00—5,666.67=*	*7,333.33 paid to B*
C:	*7,000.00—2,833.33=*	*4,166.67 paid to C*
		18,000.00

The balances in the Capital accounts of the partners are now A, $8,500.00; B, $5,666.67; and C, $2,833.33. These balances are in the profit and loss sharing ratios. Should nothing further be realized, these amounts represent the losses which the partners incur.

Should further realization be effected, the distribution will be in the profit and loss sharing ratio.

Illustration 2. The balance sheet of A, B, and C is as shown in Fig. 23.

A, B, and C

BALANCE SHEET

Cash	$44,000.00	A, Capital	$40,000.00
Deficit	36,000.00	B, Capital	35,000.00
		C, Capital	5,000.00
	$80,000.00		$80,000.00

Fig. 23

In the following tabulation the distribution of the deficit and the amount paid each partner are shown.

Particulars	A: 33⅓%	B: 33⅓%	C: 33⅓%	Total 100%
Capital Accounts	*40,000.00*	*35,000.00*	*5,000.00*	*80,000.00*
1st and Only Installment				*44,000.00*
Loss Distribution	*12,000.00*	*12,000.00*	*12,000.00*	*36,000.00*
Balances	*28,000.00*	*23,000.00*	*−7,000.00*	*44,000.00*
Application of C's Deficit	*−3,500.00*	*−3,500.00*	*+7,000.00*	
Distribution of Cash	*24,500.00*	*19,500.00*	*0.00*	*44,000.00*

Illustration 3. A, B, and C are partners, sharing profits and losses equally. Before liquidation of assets is begun, the Capital accounts show credit balances as follows:

A	*34,000.00*
B	*45,000.00*
C	*51,000.00*

The following distributions are made on successive dates: $10,000.00, $15,000.00, and $20,000.00. None of the partners has any assets which will enable him to make good any deficiency which may occur in his Capital account. The distributions and manner of apportioning losses are shown in Fig. 24.

Some Corporation Accounting Problems. As in the case of partnerships, it is proper to say that the distinctive problems that arise in corporation accounting relate primarily to net worth. This is because the method of accounting for net worth in the case of

Particulars	A	B	C	Totals
Capital Accounts	34,000.00	45,000.00	51,000.00	130,000.00
1st Installment				10,000.00
Loss Apportionment	40,000.00	40,000.00	40,000.00	120,000.00
Balances	−6,000.00	5,000.00	11,000.00	10,000.00
Allocation of A's Deficit	+6,000.00	−3,000.00	−3,000.00	
1st Distribution	0.00	2,000.00	8,000.00	10,000.00
Capital Accounts	34,000.00	43,000.00	43,000.00	120,000.00
2nd Installment				15,000.00
Loss Apportionment	35,000.00	35,000.00	35,000.00	105,000.00
Balances	−1,000.00	8,000.00	8,000.00	15,000.00
Allocation of A's Deficit	+1,000.00	−500.00	−500.00	
2nd Distribution	0.00	7,500.00	7,500.00	15,000.00
Capital Accounts	34,000.00	35,500.00	35,500.00	105,000.00
3rd Installment				20,000.00
Loss Apportionment	28,333.33	28,333.34	28,333.33	85,000.00
Balances	5,666.67	7,166.66	7,166.67	20,000.00
3rd Distribution	5,666.67	7,166.66	7,166.67	20,000.00
Capital Accounts (loss)	28,333.33	28,333.34	28,333.33	85,000.00

Fig. 24

corporations is distinctive, just as the accounting for net worth in the case of partnerships is distinctive. Whereas partnerships are of common law origin, corporations are of statutory origin. This means that the manner in which capital stock is authorized and issued, and frequently the uses of, and limitations on the uses of, surplus, are determined by the law of the state in which the corporation secures its charter. Each of the forty-eight states has enacted general corporation laws which regulate in detail the manner in which incorporation is to be effected, the treatment to be given capital stock, and the manner in which invested capital is to be preserved. Since a Surplus account is employed in corporation accounting to record profits and distributions thereof, it is to be noted that many of the states provide in their general corporation laws for the regulation, to some extent, of surplus.

Nature of Capital Stock. Since the capital stock system is the distinctive feature of the modern corporation, as regards accounting procedure, it is in order to describe, first, what capital stock is and, second, the function which it performs. The purpose of capital

stock is to provide easily transferable units of ownership of relatively small denomination. Such units of ownership do not exist in the case of sole proprietorships and partnerships. Capital stock, being statutory in origin, must be authorized, issued, and redeemed in accordance with the law of the state of incorporation. Each unit of capital stock is called a share, and may be of par or of no-par value. If the stock is par value stock, the amount of the par value is expressed on the face of the stock certificate, which is the stockholder's evidence of ownership of stock. A certificate may represent ownership of one or more shares of stock. If the stock certificate is of no-par value, there is no indication of its par value on the certificate, although some states provide for a minimum or stated value of the stock in the case of an issue on a no-par value basis.

The amount of the authorized capital stock of a corporation can be increased only by securing an amendment to the charter. Stock issued in excess of the amount authorized is void; therefore, if normal growth requires an increased capitalization, necessary steps should be taken to secure the authorization of additional stock or of additional kinds of stock.

Capital stock possesses certain characteristics which, when taken together, determine many of the advantages and disadvantages of incorporation. Perhaps the primary characteristic of capital stock is the limited liability feature. This means that when a stockholder has paid in full for his stock he cannot be subjected to any further assessment thereon; and in the event of insolvency, his loss is limited to his investment in the stock of the insolvent corporation. Whereas this feature tends to limit the corporation's credit, it tends to increase the corporation's capacity to sell its capital stock.

Capital stock is classified in various ways. Here it is necessary to discuss only the more fundamental classifications. Ordinarily, stock is either common or preferred. If a corporation issues but one kind of stock, it is called common stock. If there are two or more classes of stock, the exact manner in which these are to be named depends upon the characteristics which they possess. One group of stock is necessarily common stock, while the one or more additional groups of stock are described by some such titles as first preferred stock, second preferred stock, and so on. Invariably, the common stock

carries greater risk than does the preferred stock; but counteracting this risk there exists the possibility that the common stock will enjoy greater profit. The profit which accrues to the preferred stock is usually limited to a certain percentage of the par value of the preferred stock, or in the case of no-par preferred stock, to a specified number of dollars per share. Common stock carries the voting privilege. Each share entitles the holder to one vote. As a rule, preferred stock does not carry the voting privilege.

Preferred stock may be preferred in various ways. Any privilege granted to preferred stock and withheld from the common stock is sufficient to distinguish it as preferred stock. Thus stock might be preferred as to dividends. This means that the preferred stock is paid a dividend at a specified rate before any dividend is paid on the common stock. Furthermore, stock preferred as to dividends may be either: (1) cumulative or noncumulative, (2) participating or nonparticipating.

1. Cumulative and Noncumulative Stock. Cumulative stock is stock on which the special dividend on the preferred stock, if passed—i.e., not declared—in a given year, must be paid in some subsequent year, together with current dividends, before any dividend can be paid on the common stock. To illustrate: Suppose a corporation has outstanding $100,000.00 of 6 per cent cumulative preferred stock. Owing to the fact that there is no available profit in a given year, it is necessary to pass the dividend. In the following year the net profit is $15,000.00. The preferred stock should receive $12,000.00 in dividends, i.e., $6,000.00 for the current year and $6,000.00 for the preceding year. This leaves $3,000.00 available for payment on the common stock. If this stock had been noncumulative, it would not have been necessary to pay more than the current year's dividends, which would then have left $9,000.00 available for the common stock. It is evident that noncumulative preferred stock is not ordinarily a satisfactory investment, because of the likelihood of loss of all dividends in unprosperous years and because of the impossibility of recouping this loss in prosperous years.

2. Participating and Nonparticipating Stock. Preferred stock is either participating or nonparticipating. In case of participating preferred stock, the preferred stock first receives its specified dividend, after

which it participates equally with the common in any further dividends which are declared. To illustrate: Assume that a corporation has outstanding $100,000.00 common stock and $100,000.00 6 per cent preferred participating stock. The preferred dividend of $6,000.00 is paid in a given year. There is sufficient surplus to pay a further dividend of 5 per cent on both the common and the preferred stock. It is evident that the preferred stock participates with the common stock in the 5 per cent dividend. It is also evident that participating preferred stock is not definitely limited to a certain percentage of the profits, as is the case with nonparticipating stock. Nonparticipating preferred stock receives only its specified dividend and no more.

By way of summary of the subject of preferred stock, it may be said that preference as to dividends is the more common distinguishing feature. However, stock is sometimes preferred as to assets. This means that in case of dissolution, the investment of the preferred stockholders is returned before anything is paid to the holders of common stock as a return on their investment. To summarize, preferred stock may afford the following rights:

1. Preference as to dividends.
2. In case of cumulative preferred stock, the right to receive these dividends when earned.
3. In case of participating preferred stock, the right to share in dividends equally with the common stock after the specified preferred dividend is covered.
4. In some instances, the enjoyment of a preference in case of dissolution.
5. The right to vote, unless this right is specifically withheld.

Par versus No-Par Stock. No-par stock is of relatively recent origin. The laws of the states have been amended to permit its authorization. The reason for the popularity of no-par capital stock appears to arise out of some of the defects of par value capital stock. Formerly, capital stock was regarded as a trust fund for the protection of creditors, but the trust fund theory upon which this assumption was based is no longer recognized. The par value feature has been shown to possess certain disadvantages. One of the main disadvantages is the fact that it usually is impossible, legally, to

dispose of the stock at a discount. To circumvent the law on this point, certain subterfuges have been devised. Perhaps the best known of these subterfuges is the overvaluation of assets received in payment for the stock.

It should not be inferred that par value stock is always disadvantageous. In some instances, the par value feature is protective. This is true in particular where it is paid for in cash or in other assets which are valued on a conservative basis. Notwithstanding the irrelevancy of the trust fund theory, creditors do regard the investment of the stockholders as reflected in the par value of the capital stock as a protective feature.

If it is permissible in a given state to issue par value stock for less than its par value, it is said to be sold at a discount. This discount, however, is a contingent liability of the purchasers of the stock since, should the corporation become insolvent, the creditors may compel the payment of the discount.

No-par value capital stock does not have attached to it any amount indicative of its value or indicative of the value at which it may be issued. As a consequence, there is no prescribed price below which it cannot be sold, except in those states where a minimum or stated value is required. Where such a minimum or stated value is fixed by law, the stock cannot be issued below such price.

The chief advantage of no-par value stock appears to be the flexible way in which its selling price is established. It need not all be sold at the same price. Since the selling price may be high or low, there is not the same temptation to overvalue assets received in payment as exists in the case of par value stock.

Capital Stock on the Balance Sheet. The important facts relative to capital stock should be set forth in the balance sheet. These facts are as follows:

1. Number of authorized shares of each class of stock.
2. Number of issued shares of each class of stock.
3. Number of unissued shares of each class of stock.
4. Essential facts relative to treasury stock.
5. An indication as to the status of preferred stock, that is, whether cumulative or noncumulative, participating or nonparticipating.

6. The dividend rate applicable to preferred stock.

Fig. 25 gives the setup of capital stock typical of the average balance sheet:

Preferred Stock, 6 Per Cent Cumulative		
Authorized 4,000 Shares	$400,000.00	
Less Unissued, 1,000 Shares	100,000.00	
Issued	$300,000.00	
Less Treasury Stock, 200 Shares	20,000.00	
Outstanding, 2,800 Shares		$280,000.00
Common Stock, no par		
Authorized 5,000 Shares		
Issued, 4,000 Shares	$400,000.00	
Less Treasury Stock, 1000 Shares @ $15.00	15,000.00	
Outstanding, 3,000 Shares		$385,000.00

Fig. 25

Payment for Capital Stock. The purchaser of capital stock may pay for it in cash, or in the event of an understanding to that effect, in property, or in services. Sometimes payment is made in two or more of these. When payment is made other than in cash there arises the question as to the value of the property or services, or both, which are submitted in payment. It is in this connection that fraudulent practices sometimes occur. Par value stock ordinarily is required to be fully paid up, and it is assumed that the assets paid in are valued conservatively. Unfortunately, this is not always the case. The letter of the law is followed, but the spirit of the law is broken by placing an excessive valuation on the assets, that is, property or services, submitted in payment. The courts naturally hesitate to question the validity of transactions of this kind. It is usually left to injured creditors to question such transactions and, perhaps, to bring suit against the stockholders.

In order to indicate how injustice may arise from the over-valuation of property and services submitted in payment for capital stock, assume that a corporation issues $100,000.00 of capital stock, each share having a par value of $100.00. Of this stock $25,000.00 is sold for cash. The remaining $75,000.00 of this stock is issued in return for property and services which are overvalued to the extent of $50,000.00, its true worth being $25,000.00. In other words, the total assets received in payment are worth only $50,000.00, and the

capital stock is said to be watered to the extent of $50,000.00. It is evident that the stockholders who pay cash for their stock are seriously cheated, since the entire amount of the stock is really only 50 per cent paid up. If the assets paid in were written down to their true value, the book value of each share of stock would be only $50.00. Creditors also may be injured since they look upon the capital stock as a fund to be kept intact for their protection. Owing to the fact that the values stated are fictitious, the creditors are injured; and they may find it impossible to compel the present stockholders to make good the deficiency resulting from the over-valuation of assets contributed years before by persons no longer stockholders.

Incorporating the Enterprise. Incorporation may occur at the time of organization of the new enterprise, or it may occur in case of an existing sole proprietorship or partnership where it is desirable to change the form of organization. Where incorporation occurs at the inception of an enterprise, no serious accounting problems arise. It may or may not be desirable to make a formal journal entry for the amount of capital stock authorized. To illustrate, suppose that the X Corporation is incorporated with an authorized capital stock of $100,000.00, each share having a par value of $100.00. Assume also that $50,000.00 of this stock is immediately paid for in cash. One procedure is to make no entry for the amount of capital stock authorized, but simply to make an entry for the amount of capital stock presently sold. This entry may be as follows:

June 1, 19—			
Cash		*50,000.00*	
Capital Stock			*50,000.00*
For sale of stock as follows:			
G. B. Lesser	*300 shares*		
R. K. Best	*100 shares*		
G. K. Arthur	*100 shares*		

Sometimes it is desirable to debit Subscriptions account and credit Capital Stock Subscribed account before making the entry for the receipt of the cash. This is true particularly where an interval of time occurs between the date of the subscriptions and the date of the receipt of the cash. Assuming that the subscriptions are to be

entered as of June 1, but that the cash is not received until June 15, the entries are as follows:

June 1, 19—			
Subscriptions		*50,000.00*	
Capital Stock Subscribed			*50,000.00*
For subscriptions to stock as follows:			
G. B. Lesser	*300 shares*		
R. K. Best	*100 shares*		
G. K. Arthur	*100 shares*		
June 15, 19—			
Cash		*50,000.00*	
Subscriptions			*50,000.00*
For payment in full for the following stock:			
G. B. Lesser	*300 shares*		
R. K. Best	*100 shares*		
G. K. Arthur	*100 shares*		
June 15, 19—			
Capital Stock Subscribed		*50,000.00*	
Capital Stock			*50,000.00*
For issue of capital stock, subscriptions being fully paid.			

When an existing enterprise is to be incorporated, the procedure depends on whether or not the books of the existing enterprise are to be continued in use. It will be assumed, in the following illustration, that new books are to be opened for the corporation.

B. D. Mortimer is the sole proprietor. He desires to incorporate. His balance sheet as of January 1, 19—, is as shown in Fig. 26.

B. D. Mortimer

BALANCE SHEET

as at January 1, 19—

Assets		*Liabilities*	
Cash	$ 1,200.00	Notes Payable	$ 1,000.00
Accounts Receivable	3,100.00	Accounts Payable	900.00
Inventory	8,000.00		
Building	10,000.00	*Net Worth*	
Delivery Equipment	2,000.00	B. D. Mortimer, Capital	23,600.00
Furniture and Fixtures	1,200.00		
	$25,500.00		$25,500.00

Fig. 26

Since incorporation requires at least three incorporators, Mortimer persuades L. L. Bronson and T. K. Martin to become incor-

porators also. Each of these two men agrees to subscribe to 1 share of capital stock. The certificate of incorporation provides for an authorized capital stock of $50,000.00, each share having a par value of $100.00. There is to be issued at once $23,800.00 in capital stock, fully subscribed for as follows:

B. D. Mortimer.....	*236 shares*
L. L. Bronson.......	*1 share*
T. K. Martin......	*1 share*
	238 shares

Mortimer pays for his subscription by transferring his business to the corporation. The other subscribers pay in cash. The entry to record the subscriptions to the capital stock is as follows:

Jan. 1, 19—

Subscriptions.......................................	*23,800.00*	
Capital Stock Subscribed...........................		*23,800.00*
To record subscriptions to the capital stock of B. D. Mortimer & Co. The charter provides for an authorized capital stock of 50,000.00, that is, 500 shares, each share having a par value of 100.00.		

The subscriptions are as follows:

B. D. Mortimer.....	*236 shares*
L. L. Bronson.......	*1 share*
T. K. Martin......	*1 share*
	238 shares

The entry to record on the books of the corporation the transfer of the assets and the assumption of the debts of B. D. Mortimer, as well as the receipt of $200.00 from the two other incorporators, is as follows:

Jan. 1, 19—

Cash................................	*1,400.00*	
Accounts Receivable...........................	*3,100.00*	
Inventory.................................	*8,000.00*	
Building.................................	*10,000.00*	
Delivery Equipment...........................	*2,000.00*	
Furniture and Fixtures......................	*1,200.00*	
Notes Payable.........................		*1,000.00*
Accounts Payable.......................		*900.00*
Subscriptions..........................		*23,800.00*
For payment in full of subscriptions to capital stock.		

The entry to record the issue of capital stock would be:

Jan. 1, 19—		
Capital Stock Subscribed	*23,800.00*	
Capital Stock		*23,800.00*
For issue of 238 shares of fully paid capital stock.		

After this entry and the one preceding it are posted, the balance sheet taken from the ledger of B. D. Mortimer & Co. is as shown in Fig. 27.

B. D. Mortimer & Company

BALANCE SHEET

as at January 1, 19—

Assets		*Liabilities*		
Cash	$ 1,400.00	Notes Payable		$ 1,000.00
Accounts Receivable	3,100.00	Accounts Payable		900.00
Inventory	8,000.00	Total Liabilities		$ 1,900.00
Building	10,000.00	*Net Worth*		
Delivery Equipment	2,000.00	Authorized Common Stock	$50,000.00	
Furniture and Fixtures	1,200.00	Less Unissued	26,200.00	
		Common Stock Outstanding		23,800.00
Total Assets	$25,700.00	Total Liabilities and Net Worth		$25,700.00

Fig. 27

It is desirable to close properly the books of Mortimer, the sole proprietor. This is accomplished by means of the following entries:

Jan. 1, 19—		
Accounts Payable	*900.00*	
Notes Payable	*1,000.00*	
Capital Stock of B. D. Mortimer & Co.	*23,600.00*	
Cash		*1,200.00*
Accounts Receivable		*3,100.00*
Inventory		*8,000.00*
Building		*10,000.00*
Delivery Equipment		*2,000.00*
Furniture and Fixtures		*1,200.00*
For transfer of assets to B. D. Mortimer & Co. and assumption of liabilities by B. D. Mortimer & Co.		

The final entry to close the books of B. D. Mortimer is:

Jan. 1, 19—		
B. D. Mortimer, Capital	*23,600.00*	
Capital Stock of B. D. Mortimer & Co.		*23,600.00*
For transfer of stock of B. D. Mortimer & Co. to B. D. Mortimer.		

Chapter 3

FINANCIAL STATEMENTS

Uses of Financial Statements. Accounting systems are of little value unless they result in informative statements. In an industrial society such as exists in the United States, attention is being given constantly to statements which are supposed to reflect the progress and condition of business enterprises. It is to be regretted that these statements have not always been as complete and as informative as they should have been. Sometimes they are defective through lack of an understanding of accounting principles, sometimes as the result of an intention to deprive the investing public of the information to which it is entitled.

The development of a situation frequently unfavorable to investors has led to various attempts on the part of the government to remedy the situation. The blue-sky laws were an indication of the trend in this respect. In a sense, the establishment of the Securities and Exchange Commission may be said to be the result of agitation in favor of better financial statements.

Basically, there are two financial statements, namely, the balance sheet and the profit and loss statement. Not infrequently, however, these basic statements are supplemented by others intended either to amplify them or to supply additional data. The balance sheet is essentially the statement which reflects the state of an enterprise at a given time. For this reason it is customary to head a balance sheet "as at" December 31 or "as at" June 30. The profit and loss statement, on the other hand, is intended to show developments occurring over a given period of time. If the accounting period is one year, the profit and loss statement indicates what the revenue and expense are for the year in question. Thus if the ABC Corporation closes its books yearly on December 31, the profit and loss statement reflects income and expense for the year ending

December 31, while the balance sheet reflects the financial status of the corporation as at December 31.

Derivation of Financial Statements. Each enterprise develops its own technique relative to the problem of devising financial statements from its accounting records. To a certain extent, however, this procedure may be standardized. Some enterprises would do well to reconsider the technique which they follow in this respect. Some concerns employ the working paper method of closing their books, and therefore secure from the working paper all, or practically all, of the information required in setting up the balance sheet, profit and loss statement, and certain supplementary statements, such as the statement of surplus, as well as certain schedules amplifying the balance sheet and the profit and loss statement.

Some enterprises reject the working paper method of closing books in favor of the plan whereby the adjusting and closing entries are made directly in the journal without any preceding work, other than the mere arithmetic computations of the amounts involved in the various entries. On the whole, this plan of procedure is less satisfactory, because there is no preliminary check on the accuracy of the entire procedure such as exists when the working paper method of closing is employed.

Accuracy in financial statements necessarily depends on accuracy in the records from which the statements are derived. While it is impossible to indicate any close relationship between the manner in which the statements are derived from the records and the accuracy and comprehensiveness of the statements themselves, there is undoubtedly some connection. Satisfactory classification of ledger accounts is essential to satisfactory classification of items in the balance sheet and in the profit and loss statement. It is important that the method of closing the books be such that the marshaling of these items in the balance sheet and profit and loss statement be accomplished with the least effort.

Construction of Financial Statements. *Balance Sheet.* The balance sheet has been defined in various ways. Dicksee, noted English accountant, says it is a statement of opinion. Lisle, another English authority, in greater detail, defines it as "a concise statement compiled from the books of the concern which have been kept by

double-entry, showing on the one side all the liabilities and on the other all the assets of the concern at a particular moment of time." Both of these definitions are subject to criticism, although both are essentially true statements. For instance, a balance sheet may be prepared from systems other than double-entry books. It is possible to prepare a balance sheet from single-entry records. In fact, it is possible to prepare a balance sheet from memoranda which are not kept in the form of an organized system of records. Moreover, although it is true that some of the items in the balance sheet are to a greater or lesser extent based on opinion, many of the items are essentially statements of fact. The amount of actual depreciation is to some extent a matter of opinion; on the other hand, the amount of cash on hand and in the bank is essentially a matter of fact to be determined by counting. Lisle's definition is not sufficiently detailed to indicate what may be expected to be found in the balance sheet. It makes no mention of the classification of either liabilities or of assets. It does not mention net worth, but apparently assumes that net worth is merely one subdivision of liabilities. Modern accounting practice requires a more detailed classification of assets and of equities than can be inferred from Lisle's definition. The equities are of two essentially different types, namely: (*a*) those which take the form of direct liabilities, and (*b*) those which take the form of proprietorship, or net worth. Furthermore, no inkling is found in these definitions of certain fundamental groupings of assets and of liabilities which should appear in every balance sheet prepared for practical purposes.

Essentially, the balance sheet is a statement of financial condition and should present in sufficient detail all facts relative to assets, liabilities, and net worth to enable the reader of the balance sheet to gain an adequate picture of the concern's financial status. If an enterprise is in a financially sound condition, this should be indicated with reasonable clearness in the balance sheet. If an enterprise is insolvent, this should be evident from a study of the balance sheet.

A balance sheet cannot do more than picture the financial condition of an enterprise at a given date. If it is necessary to study the changes which have occurred over a stated period of time, two

or more successive balance sheets may be required; and it may be necessary to supplement these with a study of intervening profit and loss statements.

In some instances, reliance has been placed on balance sheets to the injury of bankers or other creditors. But not all of the failures of balance sheets to warn bankers and investors of prospective disaster might have been avoided. In regard to its financial condition, every enterprise is subject to constant change; sometimes values are destroyed as a result of new inventions, new customs, new laws, or new discoveries. The accountant may not always be able to detect unfavorable trends at the moment of their origin. It is in this connection that there necessarily enters an element of judgment. The exactitude of expression relative to financial facts found in financial statements frequently misleads those who do not realize that financial statements are at best approximations of the facts, and that a constant study of business trends should always be made to supplement and modify historical records.

To a considerable extent the form and arrangement of a balance sheet must be made to depend upon the purpose for which it is prepared. A general purpose balance sheet is one intended to fulfill as many functions as possible. A special purpose balance sheet is one devised to meet a particular demand such, for example, as that of the banker who is considering the extension of a line of credit to the concern in question.

Form of the Balance Sheet. The form which the balance sheet should take in a given instance is based on several factors. Not the least of these is the medium in which the balance sheet is to be expressed. Thus if a balance sheet is to appear in a printed report, the size and shape of the printed page is a factor to be considered. Relative to the physical limitations of the medium of publication, the balance sheet is likely to be cast in one of two forms, namely, (*a*) the report form, or (*b*) the account form. In the report form of the balance sheet, the assets are placed above and the liabilities and net worth below. This arrangement is illustrated in Fig. 28.

The same data which appears in the report form of the balance sheet in Fig. 28 appears in the account form of the balance sheet in Fig. 29.

J. B. West

BALANCE SHEET

as at March 31, 19—

Assets

Current Assets:			
Cash		$ 200.00	
Merchandise		6,000.00	
Accounts Receivable		4,000.00	$10,200.00
Fixed Assets:			
Buildings	$8,000.00		
Less Reserve for Depreciation	2,000.00	6,000.00	
Delivery Equipment	2,000.00		
Less Reserve for Depreciation	500.00	1,500.00	7,500.00
Investments			3,000.00
Deferred Assets:			
Prepaid Insurance			600.00
			$21,300.00

Liabilities

Current Liabilities:		
Notes Payable	$2,000.00	
Accounts Payable	3,000.00	$ 5,000.00
Fixed Liabilities:		
Mortgages		3,000.00

Net Worth

J. B. West, Capital	13,300.00
	$21,300.00

Fig. 28

Asset Classification. Consideration of the balance sheets shown in Figs. 28 and 29 shows what is generally regarded to be the fundamental classification of assets. This subdivision of assets is simply the reflection of the groups into which assets normally fall. It is the outcome of the nature of business. The characteristics of these subdivisions of assets are explained below.

1. Current assets are those which in the normal course of business pass through the cash stage at relatively frequent intervals. Cash itself is also a current asset. The nature of current assets is such that they are liquidated normally in less than one year. For example, merchandise should be sold out, on an average, from two to fifteen times yearly, depending on the nature of the business. Accounts receivable should be collected monthly. It is evident, therefore, that all current assets pass through either two or three stages. There are

J. B. West

BALANCE SHEET

as at March 31, 19—

Assets

Current Assets:			
Cash		$ 200.00	
Merchandise		6,000.00	
Accounts Receivable		4,000.00	$10,200.00
Fixed Assets:			
Buildings	$8,000.00		
Less Reserve for Depreciation	2,000.00	$6,000.00	
Delivery Equipment	2,000.00		
Less Reserve for Depreciation	500.00	1,500.00	7,500.00
Investments			3,000.00
Deferred Assets:			
Prepaid Insurance			600.00
			$21,300.00

Liabilities

Current Liabilities:		
Notes Payable	$2,000.00	
Accounts Payable	3,000.00	$ 5,000.00
Fixed Liabilities:		
Mortgage		3,000.00
Net Worth		
J. B. West, Capital		13,300.00
		$21,300.00

Fig. 29

two stages where merchandise is sold for cash. There are three stages where the merchandise is sold on account, namely, cash, merchandise, and accounts receivable. Viewed from a long-term point of view, this process is true also of fixed assets; but there is a distinct difference which it is not difficult to recognize. Fixed assets, although they are ultimately converted into cash, are not sold but are worn out in service.

2. *Fixed assets,* as indicated, are characterized by the fact that they are consumed or worn out in operation. To illustrate, take the case of a building which cost \$100,000.00, has an estimated life of twenty years, and an estimated salvage value of zero. Cash is expended in the construction or purchase of the building. Over a period of 25 years the building is gradually consumed in service. For this service the enterprise which owns the building receives, presumably, enough cash to pay not only current expenses of operation but also to serve as a recompense for the depreciation of the building. If the building depreciates \$4,000.00 each year, this loss in value should be offset by an accumulation of cash, or some other form of current assets. At the end of the 25-year period there should be sufficient cash available to reconstruct the asset. Thus it is seen that over long periods of time, fixed assets also are gradually realized in the form of cash.

Owing to the essential difference between current assets and fixed assets, they should be shown separately on the balance sheet.

3. *Investments* of a permanent character are clearly differentiated from other balance sheet items. Temporary investments are properly regarded as current assets, but permanent investments should be shown separately in the balance sheet. As a rule, the purpose of a permanent investment is to make possible the profitable use of funds not likely to be needed in connection with operations for a long time. Temporary investments, which are current assets, are intended to absorb, temporarily, amounts of excess cash.

4. *Deferred assets* are sometimes shown as current assets. This is incorrect, since they are not converted directly into cash as are current assets. Indirectly, of course, they are converted into cash, but only after having been absorbed as indirect items of cost.

Liability Classification. The classification of liabilities in the balance sheet is simply the outgrowth of the character of these liabilities, and of the relationship which they bear to the assets. The two divisions of liabilities are explained below.

1. *Current liabilities*, under a somewhat arbitrary rule of thumb, are assumed to include all debts which mature within one year from the date of the balance sheet. These current debts must be liquidated as they mature, and the means of accomplishing their liquidation must be found in the current asset division of the balance sheet. Much skill must be exercised in order to maintain a favorable ratio of current assets to current liabilities. Economy of treatment might justify keeping the current assets merely on an equality with the current liabilities; but safety in business requires that there be, at all times, a reasonable excess of current assets over current liabilities. The ratio of current assets to current liabilities is known as the working capital ratio. Thus if current liabilities amount to $20,000.00 and current assets amount to $60,000.00, the working capital ratio is said to be three to one. No standard can be established in this respect. In some lines of business a working capital ratio of two to one might be adequate; in other lines of business it might be regarded as unsafe.

2. *Fixed liabilities* are those whose maturity date falls more than one year hence, such as bonds of corporations, mortgages of partnerships and sole proprietorships, and notes, when these have relatively distant maturity dates, i.e., in excess of one year. So-called short-term notes of corporations usually run from 2 to 5 years from date of issue. Whether or not bonds and notes, which are properly classed as *fixed* when issued, should be treated as *current* when they approach maturity, depends on conditions. If a sinking fund is provided for their liquidation, they should not be transferred to the current liability section of the balance sheet, because their payment will not affect the amount of working capital. If, however, no special fund is thus set aside to liquidate the debt, it obviously must be paid out of working capital and so should be treated as a current liability.

Net Worth Classification. It is customary to show net worth on the liabilities side of the balance sheet. This is proper since net worth is an equity, not an asset. Unfortunately, it is sometimes

looked upon as being a liability. Net worth must be carefully distinguished from true liabilities. True liabilities mature and must be liquidated. Net worth does not mature and hence, if liquidated, the procedure is entirely voluntary; in fact, net worth cannot be liquidated, except to a certain extent, without jeopardizing the rights of creditors.

The classification of net worth to be made in the balance sheet depends primarily on the nature of the enterprise, that is, whether it is a sole proprietorship, a partnership, or a corporation. In a sole proprietorship there is but one account, namely, the Capital account of the owner. In a partnership there are as many Capital accounts as there are partners. In a corporation there is one or more Capital Stock accounts and a Surplus account, the latter showing in more or less detail the origin and classification of the different kinds of surplus.

Reserves in the Balance Sheet. The classification of reserves in the balance sheet depends upon their nature. Although there is some difference of opinion among accountants, it is a fairly general custom to regard reserves as divisible into three groups, namely, valuation reserves, liability reserves, and surplus reserves.

The purpose of valuation reserves is to supplement certain asset accounts. They supplement these asset accounts by recording the estimated decrease in the value of these assets. As a rule, the asset account records the cost of the asset, and the valuation reserve records the estimated depreciation of the asset. The best illustrations of valuation reserves are the reserve for bad debts, which evaluates accounts receivable, and the reserve for depreciation, which evaluates fixed assets such as buildings, furniture and fixtures, and delivery equipment. Although valuation reserve accounts appear with credit balances in the ledger, it is customary to show them as deductions from the assets to which they relate in the balance sheet.

The use of liability reserves is limited to the expression of debts, the amount of which is subject to future adjustment. An illustration is the Reserve for Income Taxes account, since, at the closing date, it may be impossible to state with exactitude the amount of such taxes accrued. Hence the word *reserve* is used to express the uncertain character of the debt. Sometimes the use of reserves in this connec-

tion is avoided. Thus some such caption as Provision for Income Taxes account may be employed. The trend seems to be away from the use of the reserve account in this connection. In any event, whether the word *reserve* is employed or not, the liability should be shown in the current liability section of the balance sheet.

Surplus reserve accounts represent divisions of net worth, being amounts carried from the Surplus account to special accounts, the purpose of which is to show that surplus has been earmarked for a special purpose. The Reserve for Contingencies account is an illustration. Suppose that it is decided to set up a Reserve for Contingencies account of $100,000.00. The journal entry required is:

Surplus	*100,000.00*	
Reserve for Contingencies		*100,000.00*
To set up a Reserve for Contingencies account per resolution of board of directors dated ———.		

This entry does not change essentially the amount of the surplus; it merely segregates a portion of the surplus. It is not like the transfer of a given sum from the Surplus account to the Dividends Payable account when a dividend is declared; in such cases surplus is reduced, and current liabilities are increased. The Reserve for Contingencies account and other reserve accounts which represent net worth should be shown in the net worth section of the balance sheet.

Philosophy of Balance Sheet Construction. Perhaps the basic theory upon which the modern balance sheet is constructed is to the effect that assets and equities shall be arranged in the order of liquidity. There are exceptions to this rule, but the trend favors the rule. One naturally expects, when glancing at a balance sheet, to find the current assets and the current liabilities placed, respectively, at the top of the left and right sides of the balance sheet. Below these, in so far as the application of the rule permits, are listed on the asset side, in the order of liquidity, the fixed assets, investments, and deferred charges, and on the liabilities side the fixed liabilities and net worth. Inasmuch as the proceeds from the disposal of assets will be used to pay off liabilities, it is logical to arrange the assets on the balance sheet in the order of their liquidity and liabilities in the order of their claim upon the assets. Perhaps the most notable exceptions to this rule are found in the balance sheets of some public utility companies and of a few industrial and financial concerns.

Uses of Balance Sheets. Balance sheets have a variety of uses. These vary widely in different instances. The personal balance sheet of the salaried man is strictly a private affair, is not published, and may never be submitted to the scrutiny of other people. On the other hand, the balance sheets of such corporations as the American Telephone and Telegraph Company and the United States Steel Corporation are sent to hundreds of thousands of stockholders and are examined by many analysts, statisticians, and authorities, such as the stock exchanges on which the stocks of these corporations are listed.

Frequently it is necessary, in the construction of balance sheets, to conform to the requirements of governmental or other supervisory bodies. Thus if a corporation submits its statements to the Securities and Exchange Commission in order to fulfill its requirements relative to the sale of securities, it must conform to the Commission's requirements. Balance sheets submitted as a part of a corporation's income tax return must conform to the requirements of the Treasury Department.

The National Association of Credit Men, which is concerned primarily with the extension of short-term credit, has given much attention to the classification of current assets and current liabilities. The various purposes for which balance sheets are prepared may be outlined briefly as follows:

1. Management
2. Reports
   a) Stockholders and investors
   b) In connection with taxation
   c) In connection with regulation by commissions or other governmental agencies
3. Credit
   a) Short-term
   b) Long-term

Construction of Financial Statements. *Profit and Loss Statement.* What is here termed the *profit and loss statement* is modified in actual practice as to its title, sometimes to coincide with the opinion of the compiler, sometimes to conform with custom. Thus the profit and loss statement, in the case of a manufacturing enterprise, per-

forms essentially the same purpose as the income and expense statement of a hospital.

Essentially, two groups of facts must be expressed in the profit and loss statement, whatever its exact title may be. The first group of facts relates to income, revenue, or earnings. The second group of facts relates to expenses, or costs of doing business. The principles of classification must be so applied to these facts that the reader to whom the profit and loss statement is submitted will be able to derive comprehensive information relative to the period's progress, as reflected in the figure of net profit. In this connection, wide variations in procedure exist. There is still considerable lack of uniformity in terminology. Experts are not agreed as to the exact meaning of the word "profit." Moreover, there are various kinds of profit, such as gross profit, net profit, operating profit, and nonoperating profit. Generally speaking, the following definitions will serve to describe the types of profit. *Gross profit* is the difference between net sales and cost of goods sold. *Operating profit* refers to the profit secured from the operation of the business in its regular channels and can be calculated by deducting from gross profit all expenses connected with obtaining the sales, such as selling and general expenses. *Nonoperating profit* is that profit which accrues to the business from sources other than the regular enterprises of the business, such as income on investments, rentals, and profits from the disposal of fixed assets. *Net profit* is the final gain accruing to the business after all expenses have been deducted from gross profit, plus all other income.

There is a tendency on the part of those interested in the financial progress of an enterprise to adopt a terminology more or less peculiar to the enterprise. It is true that there are various influences tending toward standardization of form and terminology in financial statements. These do not and probably should not prevent variations intended to meet the special requirements of given concerns.

Profit and Loss Statement. *Account Form.* The profit and loss statement is shown in either the account form or the report form, or both. In closing the books it is necessary to set up in the ledger some form of a profit and loss account; in its simplest arrangement this consists of one section, known as the Profit and Loss account. Fre-

quently, however, it is divided into two or more sections. In preparing reports, the profit and loss statement may be presented in essentially the same form in which it appears in the ledger. Note, however, that it is then called a *statement*, not an *account*. In Fig. 30 is shown a profit and loss statement for the X Corporation for the year ended December 31, 19—.

X Corporation

PROFIT AND LOSS STATEMENT

Year Ended December 31, 19—

Manufacturing Section

Materials	70,000.00	*Balance, Cost to Manufacture*	249,000.00
Labor	85,000.00		
Overhead:			
Indirect Labor	50,000.00		
Power	20,000.00		
Supplies	10,000.00		
Depreciation	14,000.00		
	249,000.00		249,000.00

Trading Section

Balance, Cost to Manufacture	249,000.00	*Sales*	500,000.00
Finished Goods January 1	42,000.00		
	291,000.00		
Less Finished Goods December 31	44,000.00		
Cost Goods Sold	247,000.00		
Salesmen's Salaries	36,000.00		
Advertising	26,000.00		
Other Selling Expenses	23,000.00		
Balance, Gross Trading Profit	168,000.00		
	500,000.00		500,000.00

Financial Section

Interest Expense	7,000.00	*Balance, Gross Trading Profit*	168,000.00
Balance, Net Profit	163,000.00	*Interest Income*	2,000.00
	170,000.00		170,000.00

Appropriation Section

Surplus	163,000.00	*Balance, Net Profit*	163,000.00
	163,000.00		163,000.00

Fig. 30

The same data which is presented in account form in Fig. 30 is presented in statement form in Fig. 31.

X Corporation

PROFIT AND LOSS STATEMENT

Year Ended December 31, 19—

Sales		*500,000.00*
Less Cost of Goods Sold:		
Material	*70,000.00*	
Labor	*85,000.00*	
Overhead:		
Indirect Labor	*50,000.00*	
Power	*20,000.00*	
Supplies	*10,000.00*	
Depreciation	*14,000.00*	
	249,000.00	
Less Increase in Finished Goods Inventory	*2,000.00*	*247,000.00*
Gross Profit		*253,000.00*
Less Selling Expenses:		
Salesmen's Salaries	*36,000.00*	
Advertising	*26,000.00*	
Other Selling Expense	*23,000.00*	*85,000.00*
		168,000.00
Less Interest Expense		*7,000.00*
		161,000.00
Add Interest Income		*2,000.00*
Net Profit, Year Ended December 31, 19—		*163,000.00*

Fig. 31

In Figs. 30 and 31 some details sometimes found in the statement of profit and loss are omitted. The purpose here is to present only enough details to enable the reader to compare the essential features of the two forms. The report form (Fig. 31) is the one commonly employed in published reports. The report form is more easily reproduced on the typewriter than is the account form, and to the layman unskilled in accounts it is probably more understandable.

Attention is called to the method of handling inventory in Fig. 31. The difference between the opening inventory and the ending inventory is calculated, and this difference is added or subtracted, as the case may be, in the Cost of Goods Sold section. For example, the opening inventory was $42,000.00 and the ending inventory is $44,000.00, an increase of $2,000.00. Of total goods handled, all have been sold but $2,000.00; hence, the $2,000.00 is subtracted

to find Cost of Goods Sold. Had there been a decrease in inventory, the decrease would be added to find Cost of Goods Sold.

In practice, there are many variations in the construction of the profit and loss statement. These variations extend from general form and arrangement to details of classification. Some concerns go farther than others in the matter of expense apportionment. To illustrate, consider depreciation. It is evident that a correct apportionment of depreciation expense would require its distribution to the manufacturing, selling, and administrative sections. Frequently, owing to lack of refinement in treatment of depreciation, it is shown in only one, or possibly two, of the expense divisions. In case of a manufacturing plant, it is likely to be found only in the manufacturing expense division. Sometimes, however, it is shown elsewhere as a separate item. Other items concerning which there is difference of opinion regarding their treatment in the profit and loss statement are: (1) bad debts, (2) taxes, (3) cash discounts.

1. The item of bad debts is not treated uniformly. Sometimes it is listed as a selling expense, sometimes as a financial expense, and sometimes as an administrative expense. The correct treatment depends on circumstances. Usually it should be treated as an administrative expense; but conditions may justify different treatment.

2. The tax expense item should be prorated on the basis of principles similar to those which govern the proration of depreciation.

3. Cash discounts are properly regarded as those fixed at 2 per cent or less on the amount of the transaction. Discounts in excess of 2 per cent are properly regarded as trade discounts given to effect price adjustments. Usual cash discount terms are 2 per cent if payment is made within 10 days from date of the sale. If this discount is not taken, the purchaser is allowed 20 days longer in which to make payment of the amount of the invoice. If he fails to pay within 30 days from date of purchase he may be charged interest at a specified rate on the amount of the purchase. There are, of course, variations as to the terms of the discount. Accountants generally regard cash discounts as financial in character, and therefore show them in the financial section of the profit and loss statement. Some authorities, however, regard cash discounts as a reduction of purchases.

Chapter 4

THEORY OF ACCRUALS—ADJUSTMENTS

Meaning of the Word "Accrual." Little consideration is required to show that certain items of expense and certain items of income accrue proportionately to the passage of time. Illustrations of these are: interest expense, interest income, insurance expense, rent expense, rent income, and other items. This is because the use derived from borrowed money, or insurance, or rented properties, is assumed to be equal for equal periods of time. Thus if one borrows $100.00 for one year at 6 per cent, it is assumed that equal benefit is received each day in the year from the use of the money. This, of course, may not be the case, since the money may be idle part of the time and used part of the time, or it may not be used at all. Nevertheless, the creditor, in making the loan, sacrificed all possibility of using the money for a period of one year. In view of the circumstances, it is evident that no other rule could be applied than the one which regards interest expense as evenly distributed over the period for which the loan runs. The same is true, of course, of interest income.

If one secures the use of a building by renting it for one year at an annual rental of $600.00, it is reasonable to assume that the rent expense each month is $50.00. This assumption applies to both tenant and landlord, the tenant's rent expense being $50.00 monthly, and the landlord's rent income being also $50.00 monthly.

The theory of accruals, as explained, is made to serve as the basis for certain periodic adjustments on the accounting records. As has been learned, it is customary to close the books at the end of the accounting period, usually the year. It is at this closing date that it becomes necessary to make such adjusting entries as are required to express the facts relative to accruals, as well as to deferred income and deferred expense.

The principles which govern the treatment of deferred items are essentially the same as those which govern the treatment of accruals. Deferred items represent prepayments. This is illustrated in the case of prepaid insurance and in the case of prepaid income, such as that received in advance by publishers in the form of magazine subscriptions.

There are certain items of expense which are governed by essentially the same rules as were explained above in connection with interest and rent. In particular, depreciation expense and bad debts expense may be noted. There are differences of opinion as to the manner in which depreciation expense accrues. In this country, the popularity of the straight-line method of depreciation indicates a belief that equal amounts of depreciation occur in equal periods of time. There is perhaps less reason to assume that bad debts expense accrues in the same manner as do interest and depreciation. Where, however, a large number of accounts are involved, the law of averages applies and it is reasonable to assume that bad debts expense accrues at a fairly uniform rate.

A technique has been developed by accountants whereby reasonably accurate expression, on the books, of the facts relative to income and expense resulting from accruals and from the realization of deferred items may be effected. The purpose of this chapter is to explain and illustrate the adjusting entries employed for that purpose. In this connection it may be noted that adjusting entries are required in connection with inventories in order to arrive at such figures as *cost of goods manufactured* and *cost of goods sold.* These adjustments will be considered in the following order:

1. Accruals
    a) Expenses
    b) Income
2. Deferred Items
    a) Assets
    b) Liabilities
3. Inventories

Accruing Expenses. Interest and insurance will be considered here. Assume that on September 1, 19—, John Smith borrowed $1,000.00 on a note bearing interest at 6 per cent, the interest pay-

able semiannually, September 1 and March 1. If John Smith closes his books on December 31, it is necessary to make an adjustment for four months' interest expense accrued. This amounts to $20.00. The adjusting entry required is as follows:

Dec. 31, 19—		
Interest Expense	*20.00*	
Interest Accrued		*20.00*
For interest accrued on 1,000.00 note, interest payment dates being September 1 and March 1.		

This entry being posted, there appears in the Interest Expense account a debit item of $20.00 and in the Interest Accrued account a credit item of $20.00. Through the closing process, the balance in the Interest Expense account is carried to the Profit and Loss account, and the Interest Expense account is thus closed. The balance in the Interest Accrued account, however, remains open, being a liability.

Either of two possible procedures may be followed. One procedure is to make what is known as a post-closing entry, as follows:

Jan. 1, 19—		
Interest Accrued	*20.00*	
Interest Expense		*20.00*
To reverse adjusting entry for interest expense accrued.		

If this procedure is followed, the accounts relating to interest now appear as follows:

Interest Expense

19—		19—	
Dec. 31	*20.00*	*Dec. 31 Profit and Loss*	*20.00*
		19—	
		Jan. 1 Interest Accrued	*20.00*

Interest Accrued

19—		19—	
Jan. 1 Interest Expense	*20.00*	*Dec. 31*	*20.00*

When, on March 1, 19—, John Smith pays six months' interest, the entry is as follows:

March 1, 19—		
Interest Expense	*30.00*	
Cash		*30.00*
For payment of 6 months' interest on loan of 1,000.00 at 6 per cent.		

It is evident that this leaves in the Interest Expense account a balance of $10.00, which represents the amount of interest accrued from January 1 to March 1.

The other possible procedure is to make no post-closing entry on January 1, in which case the accounts appear as follows:

Interest Expense

19—		19—	
Dec. 31	*20.00*	*Dec. 31 Profit and Loss*	*20.00*

Interest Accrued

		19—	
		Dec. 31	*20.00*

The entry on March 1, when Smith pays six months' interest, is as follows:

March 1, 19—		
Interest Accrued	*20.00*	
Interest Expense	*10.00*	
Cash		*30.00*
For payment of six months' interest on loan of 1,000.00 at 6 per cent.		

Consideration of these two methods of handling accruals will show that they accomplish the same result. Which method should be employed depends largely on custom. The method involving the use of the post-closing entry is to be preferred, as a rule, since it simplifies the procedure when actual payment is made. The entire amount of the payment is charged to Interest Expense account; under the other method, two accounts must be charged, Accrued Interest account and Interest Expense account.

Insurance is purchased by the method of prepayment, usually for a period of 1, 3, or 5 years. After its purchase, it is said to expire with the expiration of time. Assume that James Lord purchases fire insurance for three years, the premium being $360.00. There are two ways in which the payment of the premium may be recorded; it may be charged to a Prepaid Insurance account, or it may be charged to an Insurance Expense account. Assuming that the insurance is purchased on January 1, 19—, and that it is charged to a Prepaid Insurance account, the appearance of the account thereafter is as follows:

Prepaid Insurance

19—			
Jan. 1	*360.00*		

At the end of the year, the adjusting entry required is as follows:

Dec. 31, 19—		
Insurance Expense	120.00	
Prepaid Insurance		120.00
Insurance expired for one year.		

After this entry is posted, the Prepaid Insurance account appears as follows:

Prepaid Insurance

19—		19—	
Jan. 1	360.00	*Dec. 31 Insurance Expense*	120.00

This account expresses the true status of the Prepaid insurance, namely, a balance of $240.00. No post-closing entry is required under this plan of accounting for prepaid insurance. The alternative method of accounting for insurance is to charge the amount of the premium to an Insurance Expense account. If, under the conditions mentioned above, this were done, the adjusting entry on December 31, 19—, would be:

Dec. 31, 19—		
Prepaid Insurance	240.00	
Insurance Expense		240.00
To adjust for prepaid insurance.		

In the process of closing, the Insurance Expense account is balanced; but it is necessary to make a post-closing entry to transfer the amount of the prepaid insurance from the Prepaid Insurance account to the Insurance Expense account, as follows:

Jan. 1, 19—		
Insurance Expense	240.00	
Prepaid Insurance		240.00
To transfer prepaid insurance to the Insurance Expense account.		

The Insurance Expense account and the Prepaid Insurance account now appear as follows:

Insurance Expense

19—		19—	
Jan. 1 Cash	360.00	*Dec. 31 Prepaid Insurance*	240.00
		Dec. 31 Profit and Loss	120.00
	360.00		360.00
Jan. 1 Prepaid Insurance	240.00		

Prepaid Insurance

19—		19—	
Dec. 31 Insurance Expense	240.00	*Jan. 1 Insurance Expense*	240.00

Accruing Income. Perhaps the best illustration of accruing income is found in the case of interest on investments. To illustrate, assume that on March 1, 19—, E. G. McGowen purchases a \$1,000.00 bond, bearing 6 per cent interest, at par. It is evident that interest will accrue for 6 months, when it will be received in cash, \$30.00, on September 1. It may be assumed that there is no occasion to make an adjusting entry for interest accrued during this 6 months' period, because McGowen closes his books on December 31. On December 31 there will have accrued four months' interest, or \$20.00. The adjusting entry for this is as follows:

Dec. 31, 19—		
Interest Accrued	*20.00*	
Interest Income		*20.00*
For interest income accrued on 1,000.00 6 per cent bond.		

When this entry is posted, there appears in the Interest Accrued account a debit item of \$20.00, and in the Interest Income account a credit item of \$20.00. The balance in the Interest Income account is closed to the Profit and Loss account, while the balance in the Interest Accrued account remains open, being an asset. As in the treatment of interest expense, there are now two possible procedures to be followed. One is to make a post-closing entry, as follows:

Jan. 1, 19—		
Interest Income	*20.00*	
Accrued Interest		*20.00*
To reverse adjusting entry for interest income accrued.		

Under this procedure, the accounts relating to interest income now appear as follows:

Interest Income

19—		19—	
Dec. 31 Profit and Loss	*20.00*	*Dec. 31*	*20.00*
19—			
Jan. 1 Interest Accrued	*20.00*		

Interest Accrued

19—		19—	
Dec. 31	*20.00*	*Jan. 1 Interest Expense*	*20.00*

On March 1, 19—, McGowen receives 6 months' interest for which the following entry is made:

March 1, 19—		
Cash	30.00	
Interest Income		30.00
For receipt of 6 months' interest on 1,000.00 bond, bearing 6 per cent interest.		

This leaves in the Interest Income account a credit balance of $10.00, the amount of interest accrued from January 1 to March 1.

The alternative procedure is to make no post-closing entry on January 1, in which case the accounts appear as shown below:

Interest Income

19—		19—	
Dec. 31 Profit and Loss	20.00	*Dec. 31*	20.00

Interest Accrued

19—			
Dec. 31	20.00		

The entry on March 1, when McGowen receives 6 months' interest, is as follows:

March 1, 19—		
Cash	30.00	
Interest Accrued		20.00
Interest Income		10.00
For receipt of 6 months' interest on 1,000.00 bond, bearing 6 per cent interest.		

It should be noted that both methods of treating interest income accrued accomplish the same result. It is a matter of opinion as to which is preferable.

Deferred Assets. Deferred assets or prepaid expenses are investments in such things as supplies, advertising, and organization expense, the value of which is to be prorated as actual expense over future periods. This simply means that the use of the item in question is deferred to one or more succeeding periods. Prepaid insurance, the treatment of which has been illustrated, is an example of a deferred asset. In most instances the item is charged to an account, the title of which indicates that it is a prepaid expense, and therefore in the nature of an asset. This simplifies the procedure somewhat, as has been shown in the case of insurance, when charged to a Prepaid

Insurance account. In connection with the various kinds of deferred assets there invariably arises the problem of valuation. In some cases this is taken care of automatically, since the only problem is to prorate equal amounts of expense to equal accounting periods. In other cases the determination of remaining value is less definite. This is particularly the case with such items as organization expense, prepaid advertising, and costs of research and experimentation. Conservatism should govern in the writing down of such items. Obviously, prepaid advertising should not be carried on the books for more than a year or two. Organization expense should be written off in from three to five years. Experimental costs, except in unusual cases, may well be regarded as current expense.

Deferred Liabilities. Deferred liabilities are items of income applicable to future periods. When income is received in advance of the period to which it applies, it represents, temporarily, a liability, since it is a form of obligation on the part of the payee to the person who has paid it. To illustrate, take the case of a publisher of magazines who receives subscriptions in advance for three years or five years. Clearly, if the receipt of a 5-year subscription to a magazine is treated as income for the current period, profits are being anticipated. The proper procedure may be illustrated by assuming the receipt of $10.00 for a 5-year subscription. If this is received on January 1, 19—, the entry is:

Jan. 1, 19—		
Cash	*10.00*	
Deferred Income		*10.00*
For receipt of 5-year subscription in advance.		

The account, Deferred Income, shown in the foregoing entry, is, in effect, a liability and should be shown in the liability section of the balance sheet; not as a current liability, however, owing to the fact that more than one year must pass before the entire amount of the income is realized.

Inventory Adjustments. The correct treatment of inventories is of primary importance. Involved here are problems of valuation, some of which are not the work of the accountant. It may be necessary to secure the services of appraisers. Given the best available data relative to inventories, the accountant is required to make

certain adjustments at the end of the accounting period. To illustrate the procedure involved, assume that the Y Corporation began business on January 1, 19—, at which time it had no inventory of merchandise. During the year, purchases totaling $70,000.00 are made, so that on December 31 the Purchases account appears as follows:

Purchases

19—	
Jan.-Dec.	*70,000.00*

Of this $70,000.00 of purchases, $12,000.00 still remains on hand, constituting the merchandise inventory as at December 31, 19—. It is necessary to make an adjusting entry to set up a Merchandise Inventory account and to transfer $12,000.00 from the Purchases account to the debit side of the Inventory account. Until such adjustment is made, the Purchases account is a mixed account, containing a real element of $12,000.00 and an expense element of $58,000.00. The adjusting entry is as follows:

Dec. 31, 19—		
Merchandise Inventory	*12,000.00*	
Purchases		*12,000.00*
To transfer goods on hand from the Purchases account to the Inventory account.		

The accounts now appear as follows:

Purchases

19—		19—	
Jan.-Dec.	*70,000.00*	*Dec. 31 Inventory*	*12,000.00*

Inventory

19—	
Dec. 31	*12,000.00*

The balance in the Purchases account, $58,000.00, represents the cost of goods sold. The amount shown in the Inventory account is an asset. The balance of the Purchases account is carried to the Profit and Loss account in the process of closing. The inventory item of $12,000.00 is shown as a current asset in the balance sheet.

To illustrate the procedure when both the opening and closing inventories exist, assume that during the following year the Y Corporation makes purchases totaling $100,000.00, and that at the end

of the year $15,000.00 of merchandise is on hand. The accounts appear as follows on December 31, 19—, before adjustment:

Inventory

19—	
Dec. 31	*12,000.00*

Purchases

19—	
Jan.-Dec	*100,000.00*

Two adjustments are required, as follows:

Dec. 31, 19—		
Purchases	*12,000.00*	
Inventory		*12,000.00*
To carry amount of opening inventory to debit side of Purchases account.		
Inventory	*15,000.00*	
Purchases		*15,000.00*
To transfer amount of closing inventory from Purchases account to Inventory account.		

The accounts involved now appear as follows:

Inventory

19—		19—	
Dec. 31	*12,000.00*	*Dec. 31*	*12,000.00*
19—			
Dec. 31	*15,000.00*		

Purchases

19—		19—	
Jan.-Dec	*100,000.00*	*Dec. 31*	*15,000.00*
Dec. 31	*12,000.00*		

The balance of the Purchases account, $97,000.00, is the cost of goods sold. It is transferred to the Profit and Loss account by means of the following closing entry:

Dec. 31, 19—		
Profit and Loss	*97,000.00*	
Purchases		*97,000.00*
To close Purchases account into Profit and Loss.		

When ruled up, the Purchases account appears as follows:

Purchases

19—		19—	
Jan.-Dec	*100,000.00*	*Dec. 31*	*15,000.00*
Dec. 31	*12,000.00*	*Dec. 31 Profit and Loss*	*97,000.00*
	112,000.00		*112,000.00*

Chapter 5

VALUATION

Cost as Value. Many people think of the words "cost," "price," and "value" without attempting any careful distinction between these words. In some instances cost and price may be the same; in other instances the price of an article may not be its ultimate cost. Finally, value is not necessarily determined by price or cost, although the purchaser does tend to pay a price no higher than what he believes to be the value of the item purchased.

Price denotes the amount asked by the seller for an article in its present state. This price is the amount entered on the invoice.

The *ultimate cost* of an article is that total expenditure required to give the purchaser ownership of the article and to deliver it to him ready for use.

Ultimate cost is of particular interest to the accountant. It is his task to calculate the costs of an enterprise; accurate costs are composed not only of the original costs but, also, any additional costs required to install the article ready for use. Suppose that the invoice price of a machine is $2,000.00, f.o.b. factory. Additional expenditures amounting to $300.00 are required to cover transportation charges, insurance during transportation, and the installation of the machine. The total, or ultimate, cost of the machine is $2,300.00.

Accountants favor the retention upon the books of the actual cost of all fixed assets, because actual cost is a fact of such basic importance that it should be carefully recorded and preserved as long as the article in question remains on the ledger. The total cost of a fixed asset, such as a machine or a building, represents an investment which it is the purpose of the management to preserve, and knowledge of the true cost is a definite aid to those intrusted with this preservation.

A common method of approach in the determination of *value* is to evaluate an article in one's own mind and then to consider

whether or not the price of the article is as low or lower than one's estimate of its worth. One evaluates the article in terms of its usefulness to himself, as compared with the usefulness of other articles at the same price, and also, in terms of the price asked for the article.

The determination of the value of assets is of vital importance to a business enterprise. Knowledge of the cost and value of assets not only aids management in the preservation of these assets, but is useful in other ways. There are sometimes other considerations than the mere preservation of the investment in the asset. Thus, it is necessary to consider the value of assets for the purpose of insurance, and sometimes it is necessary to consider value for purposes of sale. The particular situation in which an enterprise finds itself is an important factor relative to the question of the basis of valuation that should be employed. An enterprise which is prosperous and shows no signs of financial weakness is looked upon differently from an enterprise which is insolvent and which may therefore have to be liquidated. The value of the assets of an insolvent firm would have little relationship to the price that they would bring at a forced sale. Obviously, the use to which an article can be put and the prospect of its permanent continuation in such use are the underlying considerations in estimating its present value.

Concepts of Value. The preceding paragraphs indicate that there may be more than one concept of value. This is the case. Thus economists speak of *value in exchange* and of *value in use*. In accounting, the concepts of value which are of most importance are those which are employed to reflect present-day values, as compared with those which existed at the time certain given assets were constructed or purchased. Thus appraisals of fixed assets are undertaken with a view to the ascertainment of cost to reproduce new. If this is ascertained, cost to reproduce new less accrued depreciation may then be computed. Much of the present-day discussion of reproduction cost, and reproduction cost less depreciation, is concerned with public utilities, the purpose being to enable commissions to grant a fair rate of return on invested capital. Because of increased interest in appraisals generally, and for other reasons, in this country several companies exist whose specialty consists in the making of appraisals, the results of which are supposed to be useful in one or more ways.

There can be no doubt that properly conducted appraisals result in the derivation of valuable information; thus an appraisal may indicate such wide discrepancies between book values and actual values that management is compelled to make such corrections and improvements in methods of accounting as will make it impossible for such discrepancies to arise in the future. One appraisal showed that millions of dollars worth of assets which were carried in the Plant account in the ledger were nonexistent, having long since been abandoned.

Aside from his general interest in value, the accountant is interested in methods of valuation as they must be applied in concrete situations; and in particular he is interested in the problems which arise in connection with his duty of making the accounting records reflect facts and valuable information. To illustrate, it may be interesting to know what the liquidation value of a building might be; but there is little practical value in this information as long as the building is owned and operated by a going concern. In other words, there are certain problems of value and certain valuations which may be ignored in a given instance; whereas some particular basis of valuation may be of extreme importance and deserve most careful consideration on the part of the accountant. This situation may be illustrated by taking the case of a machine costing $10,000.00 and having an estimated life of 20 years. As long as the enterprise which owns and operates the machine is successful, there is no reason to anticipate any need of sacrificing the machine under forced sale. The primary concern of the management is to preserve the capital which it has invested in the machine. This it undertakes to do by proceeding on the assumption that the machine at any given time is worth what it cost less the amount of depreciation which has accrued since the machine was purchased or constructed. In other words, from a practical accounting point of view, the machine is said to be worth original cost less accrued depreciation. If it is assumed that the depreciation occurs on a straight line basis, and that the machine will have no scrap value at the end of its useful life, it is estimated that each year depreciation amounts to $500.00. This may be regarded as the result of expired value, but since this expiration of value has occurred in connection with production it

has not been lost but has been transferred to cost of output and should be allowed for in fixing the amount of overhead to be charged to output. Under ordinary circumstances, if proper adjustment is made on the books for the amount of depreciation accruing each year, this depreciation will be earned and will tend to increase the concern's working capital, since collections from customers will be sufficient to cover all costs, including depreciation, and also to provide some profit.

How Depreciation Occurs. The subject of depreciation is given detailed attention in a later chapter. At this point, however, it may be well to ask, how depreciation does occur. Does it accrue directly in proportion to expiration of time, or are there other facts than time to be considered? Under the straight-line method of computing depreciation, it is assumed that equal amounts of depreciation accrue in equal periods of time, and since this method is by far the most popular in this country, it may be assumed that American accountants favor the theory that time is the only factor or, at any rate, the only important factor involved. This theory is not universally accepted, however. In England the reducing balance method of computing depreciation is more popular. This method is based on the theory that an equal portion of the diminishing balance in the Asset account may be taken to represent the amount of depreciation accruing in a given period. Thus, if an asset costs $1,000.00 and it is desired to compute depreciation at 20 per cent of the reducing balance, the first year's depreciation will be 20 per cent of $1,000.00, or $200.00. The second year's depreciation will be 20 per cent of the reducing balance, $800.00, or $160.00. The third year's depreciation will be 20 per cent of $640.00, or $128.00, etc. There is a tendency on the part of many accountants to avoid the use of the formal mathematical schemes for computing depreciation, and instead, wherever possible, to rely on such plans as an annual appraisal or the plan whereby depreciation is made contingent upon production. Thus an automobile may be assumed to depreciate a given sum for each mile run, and mining equipment may be assumed to depreciate a given sum for each ton of ore mined. These methods go by such names as the *Production* method and *Unit of Output* method. Unquestionably, there is much merit in them when

conditions are such as to permit their application. In some instances an actual inventory is the only feasible plan. This is true, for example, of poultry, since the flocks change so rapidly that no formal plan of computing depreciation would be practical.

In practice, the situation as regards fixed assets is usually quite complicated because of the variety of the assets. In the past many business men have regarded it as easiest simply to apply what is termed *a blanket rate of depreciation* to the entire plant, little or no consideration being given to the units comprising the plant. Recently, the necessity of being able to convince the government of the propriety of given rates of depreciation in connection with the computation of the income tax has led to the consideration of plans whereby each important unit of the plant may be given consideration. This procedure usually takes form through the utilization of a plant ledger which is operated on the same principles as are other subordinate ledgers. Each important unit is entered in its own special account in the plant ledger. The plant ledger sheet is so devised as to permit the entry of all essential facts relative to the date of purchase, cost, periodic depreciation, undepreciated balance, and any other data which may be pertinent to a full understanding of the depreciation problem as it relates to the asset in question. Under such a plan of control, depreciation rates take on a new significance. They no longer represent mere guesswork, but are the result of a careful forecast of the useful life of the unit in question. Where such a plan is in effect, the ridiculous discrepancies which sometimes occur when all items of the plant are lumped together in one account cannot occur. It is true that estimates relative to the life and salvage value of certain assets will have to be revised; but, in any event, there are not likely to occur such discrepancies as sometimes render the accounts largely worthless when there is a lack of detailed information.

Since one of the principal objects in accounting for depreciation is to preserve the investment, it is essential that investments reflected in charges to given assets be preserved by some procedure whereby values which are gradually disappearing from given fixed assets will be retained in the enterprise. In actual practice this is accomplished somewhat as follows:

Adjustment is made on the books, debiting Depreciation Expense account and crediting Reserve for Depreciation account. This depreciation expense is just as much a cost of doing business as are wages and rent. The revenues of the business should be sufficient to recover all cost of operation, including depreciation, and at the same time afford a reasonable profit. If depreciation cost is recovered through the revenues, value represented thereby must be reflected in some part of the balance sheet. In fact, it usually appears in the form of working capital, because the depreciation earned is collected from customers in the form of cash. If, for example, the depreciation in a given year amounts to $4,000 00, the corresponding reduction in the book value of capital assets will be offset by a corresponding increase of $4,000.00 in working capital.

Book Value. The preceding explanation of depreciation and the manner in which the investment is preserved emphasizes the importance, from an accounting point of view, of what is termed book value, which, moreover, is usually an important consideration in any appraisal. Thus an appraiser would not make an appraisal of a plant without giving due consideration to book value, when the records have been properly kept. In some valuations, book value loses much of its customary significance. This is true, for example, in the case of bankrupt enterprises, since there is little prospect that anything like book value will be realized in the process of liquidation. Even in such cases, however, it is customary, in setting up a statement of affairs, to indicate in one column the book value of the various items, thus making it possible to compare these values with estimated realizable values and to indicate prospective losses.

Book value is of primary significance in case of a going concern since it is computed by deducting from the Asset account the amount in the corresponding Reserve for Depreciation account, as follows:

Building	*10,000.00*	
Less: Reserve for Depreciation	*4,000 00*	*6,000.00*

It should be clearly understood that the significance of book value is based on the assumption that capital assets will be used until worn out, or until they are necessarily scrapped because ob-

solete or inadequate. The fact that capital assets have certain market values at a given time during their useful life is of no practical significance when such capital assets are to be worn out in operation. Such market value should not be expected to correspond with the book value, that is, the value shown when the depreciation reserve, which expresses accrued depreciation, is deducted from the original cost of the asset. It should be borne in mind that accrued depreciation, as computed by one or other of the methods available, possesses a relatively narrow significance. In effect, it means that that amount of depreciation has been charged to expense and has therefore been earned. If all the depreciation charged to expense is earned, which would be the case where a profit remains after all expenses have been deducted, it is evident that the expired value of particular capital assets is not expired as far as the business as a whole is concerned. This value has simply been transferred. The usual transfer is from the fixed asset division of the balance sheet to the working capital division. Thus, in effect, the application of recognized depreciation methods has as its primary object the protection of the investment. The depreciation reserve is a valuation reserve in the sense that it indicates that depreciation accrued has been compensated for through the retention in the business of funds which might have been dispersed as dividends, had depreciation been neglected and surplus consequently overstated. To illustrate the principle involved in the preceding discussion, assume that Corporation X begins business on January 1, 19—, with assets and capital stock as shown in Fig. 32.

Corporation X

BALANCE SHEET

as at January 1, 19—

Cash..................	$500,000.00	Capital Stock..........	$500,000.00
	$500,000.00		$500,000.00

Fig. 32

In this balance sheet the working capital is $500,000.00, the same as the amount of cash. There are no current liabilities to reduce it. Next, assume that during the year 19— Corporation X

constructed a building at a cost of $200,000.00. Ignoring other possible changes in the balance sheet, the result is as shown in Fig. 33.

Corporation X

BALANCE SHEET

as at January 1, 19—

Cash..	$300,000.00	Capital Stock	$500,000.00
Building	200,000.00		
	$500,000.00		$500,000.00

Fig. 33

Note that there has been a transfer in value of the $200,000.00 from the working capital division of the balance sheet to the fixed asset division. Now, if it be assumed that the life of the building is 20 years and that the salvage value will be nothing, under the straight-line method of depreciation there will be charged off each year $10,000.00 through an adjustment made on the books as follows:

Depreciation Expense	*10,000.00*	
Reserve for Depreciation		*10,000.00*

The Depreciation Expense account is transferred to the Profit and Loss account, and, if after all other expenses are thus carried to profit and loss there is shown a net profit for the year, it is evident that all expenses, including depreciation, have been earned. This means that the amounts incurred as expenses have all been reclaimed through the collection of revenue. The $10,000.00 depreciation item, having been among these expenses, will naturally reappear in the working capital division of the balance sheet, being represented by an increase in cash. On December 31, 19—, the balance sheet of Corporation X appears as shown in Fig. 34.

Corporation X

BALANCE SHEET

as at December 31, 19—

Cash		$310,000.00	Capital Stock	$500,000.00
Building	$200,000.00			
Less Reserve for Depreciation..	10,000.00	190,000.00		
		$500,000.00		$500,000.00

Fig. 34

This balance sheet is simplified in order to indicate only the results of correct depreciation accounting. In practice there would, of course, be many changes not shown here. The effect of the accounting procedure in connection with depreciation is to transfer $10,000.00 of value from the fixed asset division of the balance sheet to the working capital division. If this procedure is continued for 20 years, other balance sheet changes being ignored, the balance sheet at the end of the 20-year period will be as shown in Fig. 35.

Corporation X
BALANCE SHEET
as at December 31, 19—

Cash		$500,000.00	Capital Stock. . . .	$500,000.00
Building .	$200,000.00			
Less Reserve for Depreciation. .	200,000.00	000,000.00		
		$500,000.00		$500,000.00

Fig. 35

Departures from Book Value. As long as an enterprise adheres to the procedure indicated in the preceding paragraphs, it may be said to adhere to the book value basis of valuation. Accountants generally recommend such adherence. This is because accountants are concerned about showing those facts which are most essential to the preservation of the investment and to the operation of the enterprise. When an enterprise is established, there is every reason to believe that during the course of its life the investment, as originally established or as increased by subsequent additions, will be protected, and that, in addition, there will be earned each year a reasonable profit which may be employed either to further develop the enterprise or to pay dividends. Even where there occur occasional years in which net losses instead of net profits are made, the profitable years should be sufficiently so to enable the enterprise to earn a reasonable average rate of return on its investment, as well as to preserve it. Nevertheless, instances sometimes occur where it may be necessary to consider value from the point of view of some other basis than book value. This may be true where, owing to unfortunate developments in markets, or where, owing to the com-

petition of more efficient competitors, the possibility of preserving the investment and earning a fair return thereon disappears. When the situation becomes hopeless, it is necessary to adjust the books to a new basis of valuation, that is, one which may be regarded as the starting-point for a new enterprise career. In reality, the adjustment made on the books at such a time is merely an attempt made to cause the books to reflect the true situation. An enterprise, having found itself financially embarrassed, must adopt such measures as will enable it to return ultimately to the position of a profit-making concern. In some instances the remedy may consist in simply reshaping the various divisions of invested capital. This is likely to be the case where the difficulty arises from a shortage in working capital. Where an enterprise has become basically insolvent, it may be necessary to wind up its affairs through bankruptcy proceedings.

Assume the case of an enterprise which, as at a given date, has assets, liabilities, and capital as indicated in Fig. 36.

Corporation C

BALANCE SHEET

as at July 31, 19—

Cash	$ 500.00	Accounts Payable	$ 40,000 00
Merchandise	10,000.00	Notes Payable	20,000.00
Accounts Receivable	20,000.00	Bonds	60,000.00
Buildings	65,000.00	Capital Stock	30,000.00
Furniture and Fixtures	2,000.00		
Delivery Equipment	3,000.00		
Deficit	49,500.00		
	$150,000.00		$150,000.00

Fig. 36

This corporation has a deficit largely in excess of its capital stock. In other words, the stockholders in effect have no interest in the business, which should be taken over by the creditors and placed on a going concern basis. Just how such a plan of reorganization may be worked out depends on circumstances. The deficit of $49,500.00 must be eliminated. Assuming that $30,000.00 of this will be eliminated by cancellation of present outstanding stock, the remaining $19,500.00 deficit will have to be absorbed by the creditors. Assuming that arrangements are made whereby existing bondholders are willing to accept $40,000.00 in capital stock, existing noteholders

are willing to have their notes scaled down from $20,000.00 to $17,000.00, open account creditors are willing to have their accounts scaled down from $40,000.00 to $33,500.00, the deficit will be eliminated, the bonds will be cancelled, and the corporation will be able to begin operations anew with a capitalization of $40,000.00, providing the balance in the Building account is reduced from $65,000.00 to $55,000.00. The journal entry required to reflect the reorganization on the books is as follows:

Capital Stock (Old)	*30,000.00*	
Bonds	*60,000.00*	
Notes Payable	*3,000.00*	
Accounts Payable	*6,500.00*	
Building		*10,000.00*
Capital Stock (New)		*40,000.00*
Deficit		*49,500.00*
To reflect reorganization of Company C.		

After the foregoing entry is posted the balance sheet may be revised as shown in Fig. 37. Note that there is now a net worth of $40,000.00, the deficit having been entirely wiped out. There can be no question but that the position of Corporation C has been greatly improved as a result of the reorganization procedure. The balance in the Building account has been reduced from $65,000.00 to $55,000.00. This is an illustration of departure from the cost basis of accounting. Sometimes such a departure is made necessary because of failure to provide for accruing depreciation. In fact, one of the chief causes of financial embarrassment and consequent reorganization is the failure, over a period of years, to provide properly for accrued depreciation.

Corporation C

BALANCE SHEET

as at July 31, 19—

Cash	$ 500.00	Accounts Payable	$33,500.00
Merchandise	10,000.00	Notes Payable	17,000.00
Accounts Receivable	20,000.00	Capital Stock	40,000.00
Building	55,000.00		
Furniture and Fixtures	2,000.00		
Delivery Equipment	3,000.00		
	$90,500.00		$90,500.00

Fig. 37

Valuation for Purchase or Sale. A purchase and a sale are simply different aspects of the same transaction. Buyer and seller, in order to reach an agreement, are compelled to give consideration to the value of the article in question. It is evident that the seller will be able to realize the existing book value of an asset only in exceptional cases. If there is an element of intangible value attaching to the asset under consideration, this may result in the sale of the asset for more than its present book value, that is, original cost less accrued depreciation. Frequently, however, fixed assets must be disposed of at considerable loss because of the impossibility of finding a purchaser who can make good use of them. Undoubtedly, the earning capacity of an enterprise is of primary consideration in the task of determining what the enterprise is worth. Not merely current earnings, but the trend of earnings over a period of years, should be considered. There may be present elements of intangible value which may be considered as being goodwill, although not all intangible values are of the nature of goodwill. Goodwill has been variously defined. The famous definition of Lord Eldon is still referred to, that is, that it represents the likelihood that the old customers will resort to the old stand. Owing to changing conditions of buying and selling, much of the goodwill which formerly attached to small markets has disappeared. In place of local markets, national markets have arisen, with the result that frequently goodwill must be valued with reference to the changed situation. More appropriate to present conditions is the definition of goodwill by P. D. Leake, an English authority, to the effect that goodwill is the present value of future super profits, that is, profits in excess of what can be earned by a concern of average earning capacity.

Valuation of Goodwill. In view of the importance of giving adequate attention to goodwill in case of so-called going concerns, it is desirable at this point to consider some of the ways in which the value of goodwill may be computed or estimated. Since goodwill is the present worth of future super profits, the next procedure is to determine for a given period of years in the future what the proceeds are likely to be. At best, this is a difficult problem because of the uncertainty of certain factors involved. Obviously, the only way of projecting into the future an estimate of earnings is to ascertain

what the enterprise in question has been able to accomplish during the years immediately past. In preparing a tabulation of results for, say, the last five years, it is necessary to eliminate from the statements of profit and loss items of income and expense of an extraordinary and nonrecurring nature. Clearly, any profit which will not be earned in succeeding years cannot be considered a factor in goodwill determination. Only normal income and normal expense, such as are likely to recur, can be considered to be factors making for or against the projection of earning capacity into the future.

Suppose that after adjusting the profit and loss statement for the past 5 years for nonrepetitive factors, it is found that the profits from normal activities are, respectively, as follows: $50,700.00, $62,400.00, $68,000.00, $71,700.00, $78,125.00. What is the significance of this increasing figure of profit as regards the likelihood of future excess profits? Evidently the steady increase in annual normal profits is an indication that profits may be expected to continue increasing, although this is a presupposition which will be proved only with the expiration of time. If other factors, such as the general business situation and competition, are favorable, it would not be unreasonable to assume that net profits will average $80,000.00 for the next three years. For more distant years, any forecast that may be made is less likely to be realized. Assume that in this business the figure for normal profit is $40,000.00 yearly; therefore any excess above $40,000.00 may be regarded as the return resulting from goodwill. If it is estimated that the net profit for the next three years will be $80,000.00 yearly, it is evident that there will be, each year, an excess profit of $40,000.00. These amounts can be discounted to their present worth at whatever rate of interest seems to be appropriate. Moreover, if there is reason to believe that the rate of profit indicated may be expected to continue for at least six years, the excess profit for the fourth, fifth, and sixth years may also be discounted, but naturally at a higher rate of interest than would be applied to the first three years. A discount rate of 6 or 7 per cent would indicate a higher degree of stability and certainty as to future profits, whereas a return of 15 to 16 per cent would indicate that there is present considerable risk, and therefore much uncertainty relative to estimated future profits.

There are two possible methods of procedure in valuing goodwill by the discount method. One is to first deduct from the estimated future profits a sum sufficient to represent the annual return on invested capital, and then to discount the remaining amount; which, of course, will be the value of the goodwill when the discounted amounts for the years involved are added together. The other procedure is to discount the entire amount of each year's profit and from the amount computed by adding together the discounted sums for the years concerned deduct the value of all tangible assets. The amount remaining will be the value of the goodwill.

There are several considerations involved in the valuation of the goodwill other than the mere estimating of the future profits. Thus, if goodwill is being valued for purposes of sale, it may be found that, notwithstanding its existence, it cannot be transferred. Thus professional goodwill, such as that attached to the practice of the law or surgery, can be transferred only with difficulty, if at all. Therefore its value for sale purposes is likely to be small. The subject of goodwill valuation has received the attention of courts in both America and England. If one is interested in giving further consideration to the legal aspects of the subject, it is recommended that reference be made to *Corpus Juris*, where many court decisions are considered.

Valuation of Other Intangibles. Chief among intangible assets other than goodwill are the following: (1) patents, (2) trademarks and trade names, (3) copyrights, (4) franchises.

1. Patents. In the United States patents are grants issued by the government to inventors, giving them a monopoly on their inventions for a term of 17 years. Consequently, it is customary to depreciate the cost of patents over a period of 17 years, or less, if there is evidence that the value of the patent will expire before the patent grant expires. If a patent is purchased, it may not have 17 years to run; consequently, the purchase price should be written off over the remaining life of the patent. The cost of patents includes copyright fees, lawyers' fees, and, in many instances, the cost of defending the patent against infringement suits. In case of the purchase of a patent, the cost is simply the purchase price.

2. *Trademarks and Trade Names.* Trademarks and trade names may be registered at relatively small cost. This cost may be treated as a current expense. The purchase of a well-known trade name may, however, involve large sums of money, in which case it is proper to capitalize the cost and then amortize or depreciate this cost on a conservative basis. There is no general rule which can be applied. Each case must be treated with its own peculiarities in mind. The value of trademarks and trade names is closely allied to goodwill, and may sometimes be capitalized under that heading.

3. *Copyrights.* The cost of a copyright is merely nominal. The copyright is good for 28 years and may be renewed for a like period of time. Music, pictures, books, magazine articles, etc., are subject to the copyright privilege. In publishing, a large part of the cost of a book is the cost of the plates, which ordinarily are written off as expenses against the first printing of the book. The cost of the copyright, being nominal, should be treated as a current expense.

4. *Franchises.* Franchises are monopolistic privileges granted to public utilities. They may extend for a definite term, they may be perpetual, or they may be indeterminate. Only actual cost connected with the securing of the franchise may be capitalized. The mere grant of the monopolistic preservation, where no expenditure is involved, should not be capitalized.

Conclusion. Only the elements of the valuation problem have been considered in this chapter. Volumes have been written on the subject by engineers, accountants, and others. At this point, our interest is primarily in valuation from the point of view of the competitive operating enterprise. Space does not permit the consideration of valuation from the point of view of public utilities. It may be mentioned, however, that in this great field of enterprise, competition is to a large extent determined by the character of the undertaking. Since the utility possesses a monopoly in its field, there is nothing except the more or less remote possibility of substitution to prevent the utility from charging exhorbitant prices. As a result of this situation, it is customary to place utilities under commission control. These commissions may be either state or national as to their origin and their operation. Eventually, it is the function of the commission to ascertain the fair value of the property employed by

the utility under its supervision and to permit the utility to earn on its investment what is commonly termed a fair rate of return on fair value. The student interested in pursuing the study of valuation as applied to utilities and various other public service enterprises will find abundant literature on the subject in the form of books, valuation reports, and court decisions.

Also, it is unnecessary at this point to give detailed consideration to the question of valuation as applied to insolvent enterprises. Insolvency leads either to (*a*) reorganization or (*b*) liquidation. Some enterprises, such as railroads, cannot be liquidated, but must be reorganized under court supervision. It is inevitable that complicated questions of valuation arise in connection with such reorganization procedures. This is particularly true because of the existence of various groups and interested parties whose interests frequently conflict.

In case of the liquidation of business enterprises, the National Bankruptcy Law will naturally be invoked. Various statements are required to show the interested groups, that is, stockholders, bondholders, and creditors, the prospects in the event liquidation is carried out. Sometimes a composition is decided upon, in which case certain sacrifices are required on the part of both the stockholders and the creditors. It is possible that common stockholders will lose everything while bondholders may be compelled to accept junior securities, and unsecured creditors may be compelled to make certain sacrifices. It is evident that complicated valuation problems must arise in connection with such procedures.

Chapter 6

DEPRECIATION

Nature of Depreciation. Depreciation is the loss in value which results from the wear and tear, aging, obsolescence, and inadequacy of physical assets. In a given instance, there may be several influences which tend to create a lessening in value of the asset. It is well to note that only that influence which is most powerful and which, taken by itself, will reduce the asset value to zero in the shortest time, is really effective. For example, suppose that wear and tear will reduce an asset's value to zero in 10 years; that obsolescence will reduce the asset's value to zero in 8 years; and that inadequacy will reduce the asset's value to zero in 6 years. It is evident that wear and tear and obsolescence are negligible considerations. Of course, in practice, it is not usually possible to tell for many years in advance what the effect of such influences as obsolescence and inadequacy will be, because these are usually later developments resulting from changing conditions.

The changes which cause depreciation are both tangible and intangible in character. Wear and tear is obviously tangible, while obsolescence is clearly intangible. Where a practically new machine is superseded by a more efficient machine which is the result of some new invention, the fact that the machine which is scrapped is worthless is clearly not due to any change in the physical condition of the machine. Other influences of an intangible character have been more potent in rendering it valueless.

Depreciation is an expense. This fact is being recognized more and more, as the true character of depreciation becomes better understood. There is a tendency on the part of business men to overlook the fact that depreciation is a current expense and therefore just as much a cost of doing business as are wages, fuel, and advertising. Depreciation may be viewed from several angles. The engineer is interested primarily in the physical aspects of deprecia-

tion. The accountant is interested primarily in the financial aspects of depreciation and in devising methods of recording the essential facts relative thereto. In recent years certain developments have led to a careful study of the financial aspects of depreciation. Chief among these are the enactment of income tax laws and the recognition that depreciation is an element of cost of manufacture. The Treasury Department consistently recognizes the expense character of depreciation. In some instances, no doubt, excessive depreciation allowances have been permitted, with the result that assets still of use are fully depreciated on the books. Extensive studies of depreciation rates have been made not only by the Treasury Department but also by various business associations. This accumulated experience data serves as a means of checking depreciation rates employed by particular enterprises.

Recording of Depreciation. In the early development of accounting methods little attention was given to depreciation. As it became increasingly recognized as an expense, it became necessary to devise methods of recording on the books the essential facts involved. To illustrate the development of accounting procedure relative to depreciation, a case will be assumed. Suppose that on January 1, 19—, the X Corporation purchased a machine costing $1,000.00 and having an estimated useful life of 10 years. It was evident that each year there would accrue depreciation of approximately $100.00. Since this represented a lessening in value of the machine it was natural to assume that the account to which the cost of the machine was charged should be credited at the end of each year for $100.00. Thus, the adjusting entry at the end of the first year was made as follows:

Dec. 31, 19—		
Depreciation Expense	*100.00*	
Machine		*100.00*
To record depreciation on machine for one year.		

The Machine account then stood as follows:

Machine

19—		19—	
Jan. 1	*1,000.00*	*Dec. 31 Depreciation Expense* . . .	*100.00*

The procedure indicated above was followed until, at the end of the tenth year, the Machine account was balanced. Later, an improvement was made in the handling of the credit which in the foregoing illustration was carried to the Machine account. A Reserve for Depreciation account was set up and the adjusting entry based on the foregoing illustration was made as follows:

Dec. 31, 19—		
Depreciation Expense	*100.00*	
Reserve for Depreciation		*100.00*
To record depreciation on machine for one year.		

The setup of the accounts under this method was then as follows:

Machine

19—			
Jan. 1	*1,000.00*		

Reserve for Depreciation

19—			
		Dec. 31 Depreciation Expense	*100.00*

This method has certain advantages. It permits the balance in the asset account to stand at the original cost figure, which is of considerable importance. It clearly accounts for the amount of accrued depreciation by showing it in a separate account. The amount of accrued depreciation, as expressed in the Reserve for Depreciation account, may be said to evaluate the Machine account. In the balance sheet, the relationship of the two accounts is emphasized by showing the amount of accrued depreciation deducted from the cost of the machine, as follows:

Machine	*1,000.00*	
Less Reserve for Depreciation	*100.00*	*900.00*

The foregoing illustrates the procedure as followed today in its essential aspects. It should be noted that the only valuation made relates to the cost of the asset. When the amount in the Reserve for Depreciation account is deducted from the cost of the asset, a kind of arbitrary evaluation occurs. Thus, in the foregoing illustration, deducting the reserve of $100.00 from the cost of the machine, $1,000.00, evaluates the machine at $900.00. Obviously, this is not the present market value of the machine. It is simply a valuation made on the assumption that the machine will be used for 10 years

and will depreciate at the rate of $100.00 each year. Should the enterprise become insolvent, the evaluation afforded by this method may be useless. Sometimes other factors may make it necessary to deviate from the depreciation based on cost method of evaluation. In such cases it is necessary to make an adjustment in the accounts in order that the amounts shown in the Asset account, and in the Reserve for Depreciation account, may conform essentially to the facts. To illustrate, suppose that in case of the machine mentioned above, $100.00 depreciation is provided each year for 5 years, when it is determined that the machine will have an additional 5 years of useful life. Had this been known in the beginning, the annual depreciation allowance would have been fixed at $66.67 instead of $100.00. For 5 years an excess depreciation charge of $33.33 has been made. This amounts to $166.65, and in order to bring the accounts into agreement with the facts, it is necessary to make the following adjusting entry:

Reserve for Depreciation	*166.65*	
Surplus		*166.65*
To adjust Reserve for Depreciation account for excess depreciation written off.		

Before this adjustment is made the machine is evaluated at $500.00, as follows:

Machine	*1,000.00*	
Less Reserve for Depreciation.	*500.00*	*500.00*

After the adjustment is made the machine is evaluated at $666.65, as follows:

Machine	*1,000.00*	
Less Reserve for Depreciation.	*333.35*	*666.65*

It should be remembered that in practice the simplicity found in the foregoing illustration does not exist. It is impossible usually to set up a separate Reserve for Depreciation account for each asset account. At any rate, there is always a practical limit beyond which it is undesirable to go in attempting to account for depreciation. This has led to the adoption of various procedures whereby the amount of details may be limited without too seriously affecting the results. Thus, blanket depreciation rates are used where the number

and variety of assets are such that accounting for depreciation on each asset might be burdensome. Blanket rates are based on the best available estimate of the composite life of the plant as a whole. Recent income tax regulations, however, place increased stress upon the necessity of having facts in sufficient detail to enable the taxpayer to substantiate his claims relative to depreciation.

The Plant Ledger: The developments indicated above have led to an increasing demand on the part of business men for more detailed records of plant and equipment. In some instances it has been found that where blanket depreciation rates have been employed, wide discrepancies have resulted. The remedy is found in the operation of a plant ledger along the same lines as other subordinate ledgers, such as the accounts receivable ledger and the accounts payable ledger, are operated. The principle of the subordinate ledger is important, since it permits the keeping of detailed records controlled by the double-entry method without encumbering the general ledger with too much detail. Suppose that a manufacturing concern has a plant whose cost was $10,000,000.00 and upon which there has accrued $3,000,000.00 depreciation, as shown by the Reserve for Depreciation account. Owing to lack of detailed data relative to the depreciation of specific units of plant, it is decided to make an analysis with a view to the setting up of a plant ledger. It is necessary to determine what units or groups of units of plant are of sufficient importance to warrant setting up for them an account or accounts in the plant ledger. To indicate how the procedure of establishing the necessary facts is carried out, assume that a given machine is under consideration. All available data relative to the machine's cost at date of installation, operating history, and present status, are collected. Assume that the machine was purchased 10 years ago at a cost of $5,000.00, and that it appears to have a remaining useful life of 10 years. Based on the straight-line method of depreciation, the machine is one-half depreciated and therefore has a book value of $2,500.00. The essential data relative to the machine should be entered on a separate page of the plant ledger. The same procedure should be followed for the entire plant, so that when the survey is completed the essential facts relative to each unit of plant will be available. Based on these facts, the con-

trolling plant account in the general ledger and the Reserve for Depreciation account in the general ledger should be adjusted so that they will be in conformity with the plant ledger.

After the plant ledger is in operation, the annual depreciation charge is determined, not by applying the blanket rate to the cost of the plant, but by computing the depreciation on each unit of plant for which there is shown an account in the plant ledger. The amounts thus computed are totaled to ascertain the depreciation charge.

The advantage in the use of the plant ledger method of depreciation is obvious. It makes it possible to give each unit of the plant the attention which it deserves and thus renders impossible the occurrence of the gross discrepancies to which the application of composite blanket rates leads.

The operation of the plant ledger is almost certain to be warranted by the benefits derived. The detailed information recorded is valuable in other connections than the mere computation of the depreciation charge. At any time that there arises the question of abandonment or disposition of an asset there is available all necessary data to make the proper adjustment. The form of a plant ledger is shown in Fig. 38.

Determining the Depreciation Charge. It is well, at this point, to emphasize the importance of having available the data essential for the determination of the depreciation charge. These are three in number, namely: (1) cost of the asset in question, (2) its residual or scrap value, and (3) its estimated useful life.

It should be noted that only one of these three items, namely cost, is definite; the others are estimates. It is therefore evident that any allowance for depreciation is at best an estimate. There exist various theories as to the manner in which depreciation occurs. The theory of the straight-line method is based on the assumption that equal amounts of depreciation occur over equal periods of time. Another theory is to the effect that depreciation is greatest during the first year of an asset's life, and diminishes each year thereafter. Yet another theory maintains that depreciation increases each year. Aside from these formal theories of depreciation, there are those which make depreciation contingent on use or on the amount of

THE ACME MANUFACTURING CORPORATION

Account *Machine 5326*

Account No. *566*

Group No. *32*

Rate *12%*

Date		Memoranda	Reference	Amount	Depreciation	Depreciated Balance
19–5 Oct.	7	Cost	V. R. 8	$10,000.00		$10,000.00
19–5 Dec.	31				$ 300.00	9,700.00
19–6 Dec.	31				1,200.00	8,500.00
19–7 Dec.	31				1,200.00	7,300.00

Fig. 38

product. Detailed consideration will be given next to the various methods of depreciation employed.

The Straight-Line Method. The straight-line method, the one commonly used in this country, is based on the theory that depreciation occurs in equal amounts in equal periods of time. Thus, if a building costs \$10,000.00, has an estimated life of 10 years, and an estimated salvage value of \$1,000.00, the annual depreciation is computed as follows:

$$\frac{\$10{,}000.00 \text{ (cost)} - \$1{,}000.00 \text{ (salvage)}}{10 \text{ (years)}} = \$900.00$$

If C = Cost, S = Salvage or Scrap Value, and n = the number of periods in the life of the asset, the procedure in computing the periodic depreciation charge may be expressed as a formula, thus:

$$\frac{C-S}{n} = \text{periodic allowance for depreciation}$$

Having secured the necessary information relative to cost, salvage value, and useful life, the results secured through the application of the formula may be tabulated as shown in Fig. 39.

Year	*Depreciation*	*Accumulated Depreciation*	*Cost Less Depreciation to Date*
0	\$ 0.00	\$ 0.00	\$10,000.00
1	900.00	900.00	9,100.00
2	900.00	1,800.00	8,200.00
3	900.00	2,700.00	7,300.00
4	900.00	3,600.00	6,400.00
5	900.00	4,500.00	5,500.00
6	900.00	5,400.00	4,600.00
7	900.00	6,300.00	3,700.00
8	900.00	7,200.00	2,800.00
9	900.00	8,100.00	1,900.00
10	900.00	9,000.00	1,000.00

Fig. 39

The growth of the depreciation reserve is reflected in the Accumulated Depreciation column. There is as much reason to assume that depreciation occurs in the manner indicated by this method, as to assume that it occurs more rapidly during the first years of the plant's existence, or vice versa. Nevertheless, it is desirable to describe briefly two other formal or mathematical methods.

The Reducing Balance Method. The reducing balance method, which has met with favor in England, is based on the theory that the unamortized balance of the asset should be written down an equal percentage each period. This means that the periodic charge becomes regularly smaller each succeeding period. The nature of the formula is such that it is necessary to assume some amount for the scrap value of the asset. Letting C represent Cost, S Salvage, and n the number of periods involved, the formula may be expressed as follows:

$$1-\sqrt[n]{\frac{S}{C}}=\text{rate}$$

Assume that an asset costs \$100.00, has an estimated life of 25 years, and an estimated salvage value of \$1.00. Substituting in the formula:

$$1-\sqrt[25]{\frac{1}{100}}=.168236$$

Therefore the balance must be reduced yearly 16.8236 per cent. In Fig. 40 the tabulation of the results of the application of the formula are shown. In the first column the age of the asset in years is shown; in the second column, the balance at the end of each year; in the third column, each year's depreciation; in the fourth column, the total accrued depreciation.

The Sinking Fund Method. Under the sinking fund method the depreciation allowance each year is affected by the rate of interest on a theoretical sinking fund. The annual depreciation is the amount of the annual payment to this theoretical sinking fund plus the annual accretion of interest on this theoretical fund. In the first year there is of course no interest accretion, but after the first year the amount of interest increases each year. Assuming that r is the rate of increase, n is the estimated life in years, and V is the amount of the investment to be recovered through periodic depreciation charges, X, the periodic payment to the theoretical sinking fund, is found thus:

$$X=\frac{V(r-1)}{r^n-1}$$

Age in Years	*Depreciation for Each Year*	*Amount of Depreciation from Beginning to End of Each Year*	*The Reduced Balance*
0........................	....		$100.0000
1........................	$16.8236	$16 8236	83.1764
2........................	13.9933	30.8169	69.1831
3........................	11.6390	42.4559	57.5441
4........................	9.6810	52.1369	47.8631
5........................	8.0523	60.1892	39.8108
6........................	6.6978	66.8870	33.1130
7........................	5.5708	72.4578	27.5422
8........................	4.6136	77.0714	22.9286
9........................	3.8574	80.9288	19.0712
10........................	3.2086	84.1374	15.8626
11........................	2.6687	86.8016	13.1939
12........................	2.2197	89.0258	10.9742
13........................	1.8462	90.8720	9.1280
14........................	1.5365	92.4085	7.5915
15........................	1.2772	93.6857	6.3143
16........................	1.0623	94.7480	5.2530
17........................	.8835	95.6315	4.3685
18........................	.7349	96.3664	3.6336
19........................	.6113	96.9777	3.0223
20........................	.5084	97.4861	2.5139
21........................	.4229	97.9090	2.0910
22........................	.3498	98.2588	1.7412
23........................	.2929	98 5517	1.4483
24........................	.2437	98 7954	1.2046
25........................	.2028	98.9982	1.0018
	$98.9982		

Fig. 40

Assume that an asset costs $100.00, has an estimated life of 25 years, and an estimated salvage value of zero. The theoretical interest rate is 5 per cent. Substituting in the formula:

$$\$100\,\frac{1.05\;\;-1}{1.05^{25}-1}=\$2.0952^{+}$$

In Fig. 41 the tabulation of the results of the application of the formula are shown. In the first column the age of the asset in years is shown; in the second column the book value of the asset at the end of each year is shown; in the third column the annual payment to the theoretical sinking fund is shown; in the fourth column the theoretical accretion of interest in the sinking fund is shown; and in the fifth column the actual annual cost or depreciation, which con-

Age in Years	Value at End of Year	Annual Payment to Sinking Fund	Annual Accretion of Interest in Sinking Fund	Actual Annual Cost
0	$100.0000	......	.....	......
1	97.9048	$ 2.0952	$ 0.0000	$ 2.0952
2	95.7074	2.0952	.1049	2.2001
3	93.3947	2.0952	.2148	2.3100
4	90.9693	2.0952	.3302	2.4254
5	88.4225	2.0952	.4516	2.5468
6	85.7483	2.0952	.5790	2.6742
7	82.9405	2.0952	.7126	2.8078
8	79.9923	2.0952	.8530	2.9482
9	76.9866	2.0952	1.0005	3.0957
10	73.6462	2.0952	1.1552	3.2504
11	70.2333	2.0952	1.3177	3.4129
12	66.6497	2.0952	1.4884	3.5836
13	62.8870	2.0952	1.6675	3.7627
14	58.9361	2.0952	1.8557	3.9509
15	54.7876	2.0952	2.0533	4.1485
16	50.4317	2.0952	2.2607	4.3559
17	45.8581	2.0952	2.4784	4.5736
18	41.0557	2.0952	2.7072	4.8024
19	36.0133	2.0952	2.9472	5.0424
20	30.7187	2.0952	3.1994	5.2946
21	25.1594	2.0952	3.4641	5.5593
22	19.3221	2.0952	3.7421	5.8373
23	13.1930	2.0952	4.0339	6.1291
24	6 7574	2.0952	4.3404	6.4356
25	0.0000	2.0952	4.6622	6.7574
		$52.3800	$47.6200	$100.0000

Fig. 41

sists of the annual payment plus the year's theoretical interest accumulation, is shown.

Informal Methods. Used to a considerable extent are certain methods which are not based on fixed mathematical formulas. Consideration of the nature of industry makes it evident that depre-ˀiation is to some extent determined by the amount of activity or by amount of the product. This is especially evident in mining ˀprises. The mining equipment, shafts, and so on become ˡess when the mine is exhausted. It is evident, therefore, that of the mine determines the useful life of the equipment. ˋ the fact that the life of the mine cannot be forecast with accuracy, it may be found preferable to estimate the hich the mine will produce and then base the deprecia-ɜ each year on the tonnage produced during the year.

To illustrate, assume that a coal mine is opened, and that it is estimated that its total production of coal will amount to 1,000,000 tons. Assume that the cost of equipment, shafts, and so on, is $100,000.00. This is equivalent to 10 cents per ton of coal in the deposit. If, during the first year of operations, 50,000 tons of coal are mined, the depreciation charge for the year would amount to $5,000.00, and the depreciation charge each year thereafter would be proportionate to tonnage mined. Under this plan, original estimates may require considerable adjustment, but this would not in any way affect the validity of the plan.

Another application of the same principle is found in the plan of writing off deprcciation on automobiles by basing depreciation on mileage run. If experience shows that automobiles used for certain purposes will give 50,000 miles of service, on an average, and if the automobiles used in this service cost $1,000.00 each, the depreciation per mile operated is 2 cents. If the mileage for a given year for one car is 10,000 miles, the depreciation charge is $200.00.

There are several variations of the method explained above, made necessary by the varying conditions to which the method must be applied. One variation is to estimate the service life of the asset in working hours, and then to charge as depreciation an equal sum for each hour the asset is used or is in service. Suppose that a machine costs $1,000.00 and has an estimated service life of 20,000 hours. This results in a depreciation rate of 5 cents per hour. If, in a given year, the machine operates 3,000 hours, the depreciation for the year is $150.00.

The appraisal method is the least formal of all. This method necessitates the determination, by means of an estimate, of the value of the asset in question at the end of each period. Whatever the excess of the balance shown in the asset account is above the appraised value is the amount to be written off as depreciation. There are valid objections to the use of this method under conditions which usually exist. In applying this method there is a tendency to allow considerations of current market conditions to exercise too great an influence. The purpose of depreciation accounting, in the case of going concerns, is to preserve the investment in the asset. This can be done best by some uniform plan whercby the cost of the asset less

salvage value is returned to the company which owns it during its useful life.

Choice of a Method. Methods which are mathematically complicated should not be rejected simply because they are complicated, even though they have not proved popular in this country. Conditions in a given enterprise are important considerations. Some concerns find it desirable to classify plant and equipment to a much greater extent than others. Several years ago a large steel manufacturing concern divided its entire equipment into several groups and applied what appeared to be the proper rate of depreciation to each group. Such rough-and-ready methods of figuring depreciation are being superseded today by methods based on thc more detailed analysis of plant and equipment such as is necessary when the plant ledger is operated. With the aid of detailed information made available by the use of the plant ledger, there should not be great difficulty in determining what plan is best suited for computing the annual depreciation on each unit of plant.

Chapter 7

RESERVES AND FUNDS

Reserves and Funds Distinguished. Practically all modern balance sheets make use of reserves, or funds, or both, in one form or another. As the word *reserve* indicates, it means the setting aside, or earmarking, of something. Unfortunately, in accounting procedure, the word *reserve* has been given more than one use; thus there are valuation reserves, surplus reserves, and not infrequently liability reserves. The true reserve is a reserve of surplus; but since custom has rendered universal the employment of valuation reserves, there is little use in objecting to this terminology. No misunderstanding is likely to arise, if the necessary qualifying adjective is employed in connection with the use of the word *reserve*. Thus accountants, generally, understand that a reserve for depreciation is a valuation reserve; and they also understand that a reserve for contingencies is a true reserve; and that a reserve for taxes is a liability reserve. The matter may be summarized briefly by setting out reserves as follows: (1) true reserves, (2) valuation reserves, (3) liability reserves.

At this point it is necessary to indicate briefly the manner in which each type of reserve is established. Until this is done it is difficult to understand the relation of reserves to funds.

True reserves are set up by means of an adjusting journal entry, in which the debit or charge is made to free surplus and the credit is made to the Reserve account in question. Thus, if it is desired to set up a reserve for contingencies amounting to $10,000.00, the entry is as follows:

Dec. 31, 19—		
Earned Surplus.	*10,000.00*	
Reserve for Contingencies.		*10,000.00*
To set up reserve for contingencies.		

The adjustment for establishing the valuation reserve is made at the end of the accounting period and reflects the estimated amount

of accruing expense arising from depreciation in case of fixed assets and from estimated uncollectible accounts in case of accounts receivable. The Reserve for Depreciation and the Reserve for Bad Debts are the two principal types of valuation reserves. To illustrate the adjustment for depreciation, assume that a building costs $10,000.00 and has an estimated life of 10 years, without any remaining salvage value. The annual depreciation, by the straight line method of calculation, amounts to $1,000.00. The adjustment at the end of the year is as follows:

Dec. 31, 19—		
Depreciation Expense	*1,000.00*	
Reserve for Depreciation		*1,000.00*
For depreciation allowance on building for year ending December 31, 19—.		

For bad debts, the estimated amount for this accruing expense being determined at, say, $700.00, the adjusting entry is as follows:

Dec. 31, 19—		
Bad Debts Expense	*700.00*	
Reserve for Bad Debts		*700.00*
For provision for bad debts for year ending December 31, 19—.		

A liability reserve is established by transferring a given amount from Surplus to the Liability Reserve account in question. The procedure is similar to that required for the establishment of a true reserve, but the ultimate disposition of the reserve is different. In case of a true reserve, it is known in advance either that (*a*) the reserve will ultimately be transferred back to surplus, or that (*b*) the likelihood of its becoming a true liability is at the present time remote. Thus if a reserve for contingencies is set up, the likelihood under present conditions that a definite liability will arise necessitating a change to the Reserve for Contingencies account is remote. On the other hand, certain types of true reserves never become liabilities, but are ultimately disposed of by being transferred back to the Surplus account. This is true, for example, of a reserve for betterments.

To illustrate how a reserve for betterments is ultimately transferred back to the Surplus account, assume that a concern each year sets aside out of surplus $5,000.00 by debiting Surplus account and crediting a Reserve for Betterments account. At the end of ten

years there will be a credit balance in the Reserve for Betterments account of $50,000.00. This simply means that there is $50,000.00 of surplus earmarked and thus retained in the business, whereas this might have been distributed as dividends had it been permitted to remain in the Surplus account. It is evident that the Reserve for Betterments account is not an asset. If, at the expiration of 10 years, $50,000.00 is expended on betterments, this money will be provided in the form of cash or other property which can be given in payment. Assuming that $50,000.00 cash is expended on a betterments project, the entry for the expenditure is as follows:

Betterments	*50,000.00*	
Cash..		*50,000.00*
For betterments of ———.		

After this entry has been made and posted, there still remains in the ledger an account entitled Reserve for Betterments account with a credit balance of $50,000.00. There has been no lessening in asset values, and as a consequence there is no lessening in net worth. Since the purpose of the board of directors in making such a reservation of funds has been accomplished, the reserve may now be transferred back to the Surplus account, thus:

Reserve for Betterments...	*50,000.00*	
Surplus.....		*50,000.00*
To carry balance in Reserve for Betterments account to Surplus account.		

The preceding discussion of the manner in which surplus reserves are set up serves to indicate that the primary purpose of reserves of this type is to retain in the business values which might otherwise be distributed in the form of dividends. This mere retention of values is not a guaranty that the values so retained will take any particular form. Thus, if there exists a surplus of $100,000.00, and the board of directors votes to transfer $25,000.00 of this amount to a Reserve for Contingencies account, it is evident that there occurs no change in the status of the assets themselves. Current assets, fixed assets, and investments remain the same as before the reserve was established. There is now, however, only $75,000.00 in free surplus available for dividends, whereas before the reserve was set up there was $100,000.00 of surplus available for dividends.

There is not much likelihood that the board of directors will reverse its own policy by transferring the amount reserved back to the Surplus account. Consequently, the $25,000.00 reserved will be retained in the business. This probably means that working capital will be $25,000.00 more than it would be were the entire $100,000.00 of surplus used to pay dividends. It also means that there is likely to be $25,000.00 more of cash on hand than would be the case were no reserve established and all available surplus used to pay dividends.

In order to meet more fully the requirements for available funds at the time they are needed, it is commonly customary to establish funds. Such a fund may or may not be employed in connection with a corresponding reserve. Funds are more frequently required in connection with the issue of bonds than are reserves. The fund, if set up in the hands of a dependable trustee, will amount to an absolute guaranty that there will be forthcoming the money necessary to meet the requirements. Perhaps the most common use of funds in business is found in the case of sinking funds, whereby means is provided for the retirement of outstanding bonds. Thus, if there is outstanding a one million dollar issue of bonds, due 20 years from date of issue, it is evident that if it is required that a fund be set up by specified payments to the sinking fund trustee, the amount thus accumulating under the supervision of the trustee will be available when needed for the retirement of part or all of the outstanding bonds.

Sinking Fund and Sinking Fund Reserves Illustrated. To illustrate the procedure required in connection with the operation of a sinking fund and a corresponding sinking fund reserve, assume that Corporation A sells an issue of 6 per cent bonds, the principal sum amounting to $1,000,000.00. These bonds mature in 10 years, when they will be redeemed at their face value. There is, of course, no objection to the repurchase of outstanding bonds at any time that funds are available for that purpose. In order to simplify the computations involved, interest will be neglected. The trust deed requires that the corporation each year pay to the sinking fund trustee $100,000.00 to provide for a sinking fund for the retirement of the bonds. It is evident that if interest is earned by the sinking

fund, and added to it, this annual provision will be in excess of requirements. Here, however, interest is neglected, so that the total payments to the sinking fund trustee will amount to $1,000,000.00 in 10 years. In the practical management of sinking funds it is rarely the case that the fund is kept entirely intact and allowed to accumulate at compound interest. Instead, the trustee buys up outstanding bonds of the issue in question when prices are favorable. In this way the fund is employed in the safest possible manner, namely, to retire bonds of the issue which the fund is established to retire. The trust deed will indicate the date and manner in which the sinking fund installments will be paid by the corporation to the sinking fund trustee. In the present illustration it may be assumed that the $100,000.00 payment will be made at the end of each year following the issue of the bonds. If the bonds are issued on July 1, 19–5, the first $100,000.00 installment will be due on July 1, 19–6, the second on July 1, 19–7, etc. The entry at the time the payment is made is as follows, on the books of Corporation A:

Sinking Fund Trustee.........................	*100,000.00*	
Cash		*100,000.00*
For payment to sinking fund, as provided by trust deed.		

During the next year the sinking fund trustee may use a part or all of this $100,000.00 to buy up outstanding bonds of the issue in question if he is permitted to do so by the trust deed and if the market is favorable. Assume that on September 1, 19–6, the sinking fund trustee purchases $50,000.00 of the outstanding bonds at their par value plus accrued interest, this interest amounting to $1,000.00. The entry on the books of the corporation, when it has been informed of the transaction by the sinking fund trustee, is as follows:

Bonds	*50,000.00*	
Interest Expense..................................	*1,000.00*	
Sinking Fund Trustee.......................		*51,000.00*
For purchase by sinking fund trustee of 50,000.00 par value of 6 per cent bonds, and payment by trustee of accrued interest thereon.		

Since the payment of interest should be made by the corporation, not by the sinking fund trustee, it will be necessary for the corporation to reimburse the sinking fund trustee for the $1,000.00 paid on

account of interest expense. The entry for this reimbursement is as follows:

Sinking Fund Trustee	*1,000.00*	
Cash		*1,000.00*
To reimburse sinking fund trustee for accrued interest paid when 50,000.00 of bonds are retired.		

At the end of each year, the payment of $100,000.00 will be made to the sinking fund trustee, and he may or may not use the available funds for the further retirement of outstanding bonds. In any event, at the end of ten years, there should be in the hands of the sinking fund trustee approximately enough money to pay off the balance of the outstanding bonds. It is evident, however, that where amounts are paid to retire outstanding bonds at various dates, between the issue date and final retirement date, at varying market prices, there is no way to guarantee that the exact amount required to pay off outstanding bonds will be in the fund at the end of 10 years. The corporation may be required to make an adjustment by paying to the sinking fund trustee whatever deficiency may exist. If, on the other hand, after all bonds are retired, there remains a surplus in the sinking fund, this will be paid to the corporation by the trustee.

Thus far the sinking fund reserve has not been mentioned. The trust deed is usually specific relative to the sinking fund, but frequently it makes no provision relative to a sinking fund reserve. This is because the creation of the sinking fund is of primary importance from the point of view of the bondholders, whereas the creation of a sinking fund reserve is of primary importance to the corporation's managers. Therefore, the creation of the sinking fund reserve may not be made obligatory. If, however, it is required by the trust deed, it must be created specifically in accordance with the requirements. So if the trust deed specifies that each year there shall be reserved $100,000.00 of surplus by transferring surplus to a special reserve account, the entry on January 1, or other specified date, each year, would be as follows:

Surplus	*100,000.00*	
Sinking Fund Reserve		*100,000.00*
To transfer from Surplus to the Sinking Fund Reserve account, the amount specified in the trust deed.		

If this procedure is continued yearly there will be in the Sinking Fund Reserve account $1,000,000.00 at the end of the 10-year period. Even after the bonds are redeemed, this credit balance of $1,000,000.00 will remain in the Sinking Fund Reserve account. The reserve is not paid out; cash is paid out. Making the reservation of surplus merely strengthens the financial structure of the corporation. The position might not be equally strong were the amount of $100,000.00 not annually transferred from the Surplus account to the Sinking Fund Reserve account; for if the trust deed does not specify the creation of the Sinking Fund Reserve account, the entire amount of free surplus might at any time be used to declare a dividend. Where the sinking fund reserve is obligatory, the amount in the Sinking Fund Reserve account cannot be transferred back to the Surplus account except in accordance with the terms of the trust deed. Where the sinking fund reserve is not obligatory, the board of directors may at any time reverse its action and transfer the amount shown in the Sinking Fund Reserve account back to the Surplus account, but this would represent a change of policy not likely to occur.

After the bonds have been redeemed in full, the bondholders no longer have any interest in the corporation's financial condition; and it is evident that the corporation is free to transfer the entire amount in the Sinking Fund Reserve account back to the Surplus account. If the amount reserved over the 10-year period totals $1,000,000.00, the entry required to transfer this back to the Surplus account is as follows:

Reserve for Sinking Fund	*1,000,000.00*	
Surplus		*1,000,000.00*
To transfer amount reserved back to Surplus account, the entire issue of bonds involved having been redeemed.		

It is evident that the setting up of the sinking fund reserve has as its object merely to strengthen the position of the corporation and thus to preserve its capacity to make payments to the sinking fund. It is for this reason that the setting up of the reserve is usually optional, whereas the payments to the sinking fund trustee are compulsory.

Sinking Funds and Sinking Fund Reserve Illustrated. In order to show the practical application of the principles discussed in

the preceding pages, it is necessary at this point to give a brief illustration summarizing the entries required in connection with the operation of the sinking fund and the sinking fund reserve. Assume that on January 1, 19—, Company A issues $1,000,000.00 of 10-year, 6 per cent, first mortgage bonds, in order to obtain funds for the enlargement of its plant. The trust deed provides that a sinking fund shall be established by semiannual payments of $50,000.00 on July 1 and January 1 of each year until the bonds mature 10 years later; also that on December 31 of each year there shall be transferred from Surplus account to the Sinking Fund Reserve account $100,000.00. The trust deed also provides that any amounts in the sinking fund may be employed at any time market conditions warrant to buy up outstanding bonds of the issue in question. Provision is also made to the effect that all interest earned by the sinking fund shall be paid by the trustee to Corporation A, and thus be treated as a part of the corporation's income, not as income of the sinking fund. The entry on July 1, 19—, for the first installment paid into the sinking fund is as follows:

Books of Corporation A			**Books of Sinking Fund Trustee**		
Sinking Fund Trustee	*50,000.00*		*Cash . . . .*	*50,000.00*	
Cash .		*50,000.00*	*Corporation A .*		*50,000.00*
For first payment to sinking fund.			*For first payment received from Corporation A*		

The entry required in December of the same year is:

Dec. 31, 19—					
Surplus .	*100,000.00*		*None.*		
Sinking Fund Reserve . . .		*100,000.00*			
To set up sinking fund reserve per requirements of trust deed.					

It will be assumed that in this case the sinking fund trustee chooses not to purchase any outstanding bonds during the 10-year period, but to redeem the entire issue at the maturity date. At this date there will be $1,000,000.00 in the hands of the sinking fund trustee. When the sinking fund trustee redeems the outstanding bonds, the entries on the corporation's books and the entries on the books of the trustee are as follows:

Books of Corporation A

Bonds Payable	*1,000,000 00*	
Sinking Fund Trustee		*1,000,000.00*
For redemption of issue of 6 per cent bonds.		

Books of Sinking Fund Trustee

Corporation A	*1,000,000 00*	
Cash		*1,000,000.00*
For redemption of issue of 6 per cent bonds		

At the end of each year there has been transferred to the Sinking Fund Reserve account from Surplus account $100,000.00, so that at the end of the 10-year period the Sinking Fund Reserve account has in it a credit balance of $1,000,000.00. The entry to reflect its transfer back to Surplus account is as follows:

Books of Corporation A

Sinking Fund Reserve	*1,000,000 00*	
Surplus		*1,000,000.00*
To transfer sinking fund reserve to surplus, the outstanding bonds having been redeemed by trustee.		

Books of Sinking Fund Trustee

None.

In practice there are many variations to be found in the treatment of sinking funds and of sinking fund reserves. Sometimes the fund is found without a corresponding reserve, and occasionally a reserve is found without a corresponding fund. Also, in practice there is great variation relative to the manner in which the sinking fund may be operated. Sometimes, in theory, the fund is regarded as increasing according to the laws of some mathematical formula. But in practice this rarely or never exactly occurs. Even though an attempt is made to reinvest all earnings of the fund, there will at times be some part thereof uninvested, and therefore earning no interest. Also, the fund will not, in practice, be earning the same rate of interest as is assumed in the application of the sinking fund formula. With respect to a particular issue of bonds, the terms of the trust deed should be consulted to ascertain the duties of the trustee and the obligations of the corporation, relative to the sinking fund.

Other Surplus Reserves. In addition to the sinking fund reserve discussed above, there are several other types of reserves of

surplus. Chief among these are the following: (1) reserves for contingencies, (2) reserves for betterments.

1. Reserves for Contingencies. A contingency is a possible future occurrence which is indicated by present conditions. Mere accidents which may occur in the future are not contingencies, since there is nothing in the present situation to indicate that they may happen. An example of a contingency is a lawsuit brought against an enterprise by a competitor for trademark infringements. The lawsuit is an actuality, but the possibility of an adverse court decision is as yet merely a contingency. Should the final outcome of thc litigation result in an adverse decision and the issuance of a court judgment for the payment of $10,000.00 to the competitor, the contingency would become an actuality or, in other words, the contingent liability which existed before the court decision became final now becomes an actual liability.

There are other kinds of contingencies; for example, a contingency arises when a person or enterprise indorses notes receivable in order to discount them at a bank. This particular type of contingency appears in the balance sheet because, when notes receivable are discounted, the following journal entry is usually made:

Cash	*XXX.XX*	
Notes Receivable Discounted		*XXX.XX*
For discounting of notes receivable.		

Not all contingent liabilities are thus definitely expressed in the balance sheet. Somctimes a footnote is employed to explain the existence of a contingcnt liability. Sometimes the contingent liability is expressed *short* in the balance sheet; that is, the estimated amount of the contingent liability is shown but is not carried into the final money column of the balance sheet. It may be said to be a memorandum introduced into the balance sheet.

Probably the best general description of the reserve for contingencies is to the effect that it represents the setting aside or earmarking of surplus for purposes of conservatism. Some reservations of this type are made merely as a general protective measure, without having in mind any specific contingent liability. Reserves of this type serve as a kind of cushion, not only against losses arising from contingencies, but also against losses resulting from mere accidents.

Also, it appears that in some cases the reservation is made, not so much for the purpose of providing against future contingencies and accidents, as to diminish the amount of free surplus available for paying dividends.

Since reserves for contingencies are noncontractual in character, they are usually established by resolution of the board of directors, but the same board which authorizes their establishment may reverse its action by authorizing a transfer from the reserve back to surplus. The setting aside of reserves which are noncontractual in character may be said to reflect the policy of the management relative to future events. Therefore, unless there occurs a change in management, it would not be expected that such a policy would be reversed lightly.

The entry for the establishment of a reserve for contingencies may be made at any time, since it represents merely the transfer of a portion of net worth from one Net Worth account to another Net Worth account. It would naturally be made shortly after the meeting of the board of directors at which the establishment of the reserve is voted. The journal entry required is simple in character, being in the form of a debit to free surplus and a credit to the Reserve for Contingencies account. Thus, if the board of directors of Corporation Y votes, on January 16, 19—, to reserve $100,000.00 of free surplus as a reserve for contingencies, the necessary entry might be made on January 17, as follows:

Surplus	*100,000.00*	
Reserve for Contingencies		*100,000.00*
Reservation made per resolution of Board of Directors on January 16, 19—. See minute book, page —.		

2. *Reserves for Betterments.* A betterment is a capital expenditure. Thus a corporation may be planning a program requiring the expansion of its plant and equipment. The funds for such a program might be secured in one or more of several ways. Perhaps the most appropriate source of funds for such an expansion program would be the earnings of the enterprise, but it might be necessary to supplement these sources by the sale of capital stock, or by the sale of bonds, or by the use of a part of the concern's working capital. If the board of directors has planned for future expansion, it might

find it desirable to set up a reserve for betterments by transferring to a Reserve for Betterments account from the Surplus account a given sum. Thus if corporation B has free earned surplus of $500,000.00, it might transfer $200,000.00 of this to a Reserve for Betterments account, through the following journal entry:

Surplus	*200,000 00*	
Reserve for Betterments		*200,000.00*
Per resolution of Board of Directors, dated January 15, 19—. See minute book, page —.		

Whether the foregoing is the appropriate sum to be reserved out of surplus is a question of financial judgment which must take into consideration such problems as the established dividend policy of the corporation and the need of maintaining a certain working capital position, since paying dividends and contracting for betterments both reduce working capital.

Assuming that when Corporation B finds it necessary to make expenditures on its betterments program there exists on its books a Reserve for Betterments account having a credit balance of $600,000.00, what is the appropriate treatment of this account? There appears to be no objection to closing the amount credited to the account back into the Surplus account since the purpose for which the reserve was established, namely, the provision of funds for expansion, has been accomplished. Obviously, however, the corporation is no longer in a position to pay out as much in dividends, because its working capital has been reduced as a result of its program of expenditures on betterments.

Valuation Reserves. Valuation reserves, as distinguished from true reserves, are not set up out of surplus and do not form a part of net worth. Some objection has been raised to the use of the word *reserve* in this connection, but custom has placed the stamp of approval on its use, and this commonly accepted terminology will be employed here. The purpose of a valuation reserve is to supplement or evaluate some asset account. Thus if a fixed asset such as a building is concerned, the valuation reserve is known as the Reserve for Depreciation on Building account; and in case of accounts receivable the valuation reserve is known as the Reserve for Bad Debts account. The theory of the valuation reserve is to the effect

that the reserve represents the amount of decline in value, usually based on original cost, which has occurred through the use of the asset, in case of fixed assets; and through the occurrence of losses in the form of uncollectible accounts, in case of accounts receivable. The reserve for depreciation and the reserve for bad debts arc further considered in the following paragraphs.

1. Reserve for Depreciation. The general theory of depreciation has been considered in Chapter 6. Here the problem is mercly to indicate the general purpose of the reserve for depreciation and to explain its status as a factor in the evaluation of fixed assets. Obviously, the starting-point must ordinarily be the cost of the asset which is to be evaluated. Departures from this plan are sometimes made, but only in the event that the original cost basis of valuation is no longer the appropriate one to use. The depreciation which accrues from year to year in connection with a fixed asset represents, in the words of P. D. Leake, the expiration of capital outlay and presumably indicates the amount which has been charged to customers as the result of treating depreciation as an operating expense, being added to the cost of output or regarded as a part of the cost of service rendered.

In the balance sheet, custom has established the policy of deducting the amount of the depreciation reserve from the asset to which the reserve relates, or which it evaluates. The extent to which details may be shown in the balance sheet depends upon circumstances. Thus where a detailed plant ledger is maintained there naturally exists a breakdown in the investment in fixed assets, and as many details may be shown in the balance sheet as circumstances warrant.

As has been stated, the usual procedure is to base the depreciation charge, and therefore the depreciation reserve, on original cost. In some instances, however, this procedure cannot be maintained. When departure from original cost must be made, there may result certain problems relative to the correct treatment of depreciation. Thus, if an appraisal of plant results in the write-up of plant values on the books, it must be decided whether or not to base depreciation on the written-up values. If depreciation is based on the increased values, the revaluation surplus is gradually converted into earned

surplus. This is not the case, however, when, notwithstanding the write-up, the depreciation allowance is based on cost. As explained elsewhere, the procedure in such event is to gradually transfer revaluation surplus to the depreciation reserve.

Question arises as to the advisability of establishing depreciation funds. Obviously, the purpose of such a fund is to reflect the amount of depreciation which has been earned, as well as to render available a specific sum to be used to replace the asset when it is apparent that replacement is necessary. In practice, the depreciation fund is rarely or never found. This is because the amount of the earned depreciation may be more profitably employed to increase working capital, or to provide funds for replacements, or for expansion of plant immediately required. If a depreciation fund is established it must be invested usually in high-grade securities which will possess an earning power lower than that which the fund would earn if not segregated, but used instead where most needed in connection with the operations of the enterprise.

2. *Reserve for Bad Debts.* Although the reserve for bad debts is a valuation reserve, and is customarily deducted from the accounts receivable in the balance sheet, it operates somewhat differently from the depreciation reserve. The depreciation reserve accumulates until, after a period of years, it is sufficient to permit the cancellation against it of the asset account which it evaluates. The Reserve for Bad Debts account evaluates accounts receivable, which is not a fixed asset and which therefore does not depreciate in the accepted sense of the word.

To illustrate the theory which underlies the treatment of bad and doubtful accounts, take the case of a corporation which begins business on January 1, selling to customers on credit and for cash. It is evident that no losses can occur in connection with sales for cash, but that notwithstanding careful credit investigation some losses will occur in connection with credit sales. Assuming that the credit terms are thirty days, it is evident that within one month after the statements for the given month are mailed to customers most of the accounts will have been settled. Some, however, will remain unpaid and become overdue. At the end of the year it will be found that a few accounts created in the first months of the year are still

unpaid but that the larger amounts of unpaid accounts which remain on the books arise from sales made in the later months of the year, most or all of those for December remaining unpaid. The problem is to estimate what amount of losses may be expected to occur ultimately in connection with charge sales made during the year. In case of a new enterprise there will be little available information relative to the percentage of accounts receivable which will prove to be uncollectible. Experience of concerns engaged in the same line of business may, however, be available. It is evident that the logical procedure is to estimate the loss on the basis of a percentage of the sales made on account during the year, rather than on the basis of the unpaid accounts outstanding at the end of the year, since most of these unpaid accounts originate in November and December. Assuming that one-half of 1 per cent of all sales made on account will prove to be uncollectible, and that the sales on account during the year amount to $500,000.00, the amount which may be expected to prove uncollectible will be one-half of 1 per cent of $500,000.00 or $2,500.00. Since it is not likely that any account originating in a given year will be proved to be uncollectible within the year, it is evident that practically all uncollectible accounts will be proved to be such in the year or years which follow the year in which the credit sales are made. Therefore, at the end of the year in question, the adjustment to provide for estimated uncollectible accounts should be for the entire amount in the year in question. As this is $2,500.00, the adjusting entry is as follows:

Dec. 31, 19—		
Bad Debts Expense	*2,500.00*	
Reserve for Bad Debts		*2,500.00*
To reserve one-half of 1 per cent of sales on account, to provide for estimated uncollectible accounts.		

If the estimate proves to be correct, there will be a total of $2,500.00 in accounts receivable dating from the year in question which will prove to be uncollectible. It is not to be expected that the estimate can be made with such great accuracy. Therefore, if uncollectible accounts dating from the year in question ultimately prove to amount to $2,337.41, or $162.59 less than estimated, the difference would not be regarded as excessive. It simply means that the amount

charged to Bad Debts Expense account in the year in question was \$162.59 more than it should have been. In the following year, or as soon as it is determined that bad debts are being slightly overestimated, it would be advisable to reduce slightly the estimated percentage of bad debts. Since profit is understated \$162.59 in the year in question, it would be advisable to transfer the unused portion of the reserve for bad debts to Surplus account, thus making surplus what it would have been had bad debts expense been correctly estimated. The entry required to make such transfer of the unused portion of the reserve is as follows:

Reserve for Bad Debts	*162.59*	
Surplus		*162.59*
To transfer to surplus excess of estimated bad debts over the amount of bad debts actually realized for the year ——.		

Whenever any account is finally ascertained to be uncollectible, it must be charged against the Reserve for Bad Debts account. After the accounts receivable are recorded in a subordinate accounts receivable ledger the entry to adjust the general ledger accounts is as follows, assuming the loss on a bad account amounts to \$27.30:

Reserve for Bad Debts	*27.30*	
Accounts Receivable		*27.30*
To write off uncollectible account of J. K. Atkins, his account in the accounts receivable ledger having been transferred to the file of uncollectible customers' accounts.		

It is evident that, whereas the reserve for depreciation accumulates in amount from year to year, the reserve for bad debts does not. The reason for this is that the reserve for bad debts makes provision for an expense which is realized definitively in a short time, whereas the reserve for depreciation makes provision for an estimated accruing expense which continues over a period of several, or perhaps many, years. Within a year or two from the date of the making of the reservation for bad debts, the entire amount reserved will have been cancelled by having charged against it the amount of bad debts proved to be uncollectible. Therefore, at any given balance sheet date, the amount of the reserve for bad debts usually relates largely to the current year but may contain a small amount which relates to accounts of the previous year not yet definitely settled.

Liability Reserve. A liability reserve is simply a provision for a debt the amount of which is not yet definitely ascertainable. Perhaps the most frequent illustration of a liability reserve occurs in connection with taxes. Since the exact amount of taxes for the year is not known until after the close of the year and until after the books are closed for the year, it is evident that an estimate of the amount of taxes accrued must be made monthly if the books are closed each month, or at the end of the year if the books are closed only yearly.

To illustrate, assume that Corporation G paid taxes for a given year amounting to $854.00. During the next year provision in the form of a reserve for taxes is set up on the assumption that the taxes will be the same as for the preceding year. This amounts each month to 1/12 of $854.00, or $71.16, monthly. Therefore, if provision is made monthly for estimated accrued taxes the following adjusting entry is made at the end of each month:

Taxes Expense.	*71.16*	
Reserve for Taxes.		*71.16*
For taxes accrued.		

As of the closing date, December 31, the Taxes Expense account will be closed into the Profit and Loss account, whereas the Reserve for Taxes account will be shown as a current liability on the balance sheet. If the tax bill, when received, shows the tax liability to be $875.00, the entry for its payment is as follows:

Reserve for Taxes.	*854.00*	
Surplus.	*21.00*	
Cash.		*875.00*
For taxes for preceding year, excess of amount of estimated taxes being charged to Surplus account.		

Chapter 8

PROMOTION AND ORGANIZATION OF CORPORATIONS

A Form of Organization. The corporation is a form of organization which owes its existence to the state. Corporations are established in accordance with either (*a*) special act of the legislature, or (*b*) general incorporation acts.

Formerly, many business corporations were established under special legislation, but the increase in number of corporations organized has made it necessary for the states to enact general legislation. In accordance therewith application is made to the secretary of the state, who, after investigating the proposed incorporation, if satisfied that all requirements have been met, issues a charter, or certificate of incorporation, and thus authorizes the new corporation to engage in business within the limits of its granted powers.

Problems of Corporate Organization. The special problems which confront those who establish and operate a business under the corporate form are: (1) legal, (2) financial, (3) accounting.

The purchasing, operating, and selling functions are the same in a corporation as in a partnership or sole proprietorship, varying only with the nature and size of the business. The legal, financial, and accounting problems involved in corporate procedure present certain aspects which are peculiar, and are not met with in the operation of partnerships or sole proprietorships.

Corporate Indebtedness. The form of corporate indebtedness differs somewhat from that of sole proprietorships and partnerships; nevertheless, rights of corporate creditors are essentially the same as those of creditors generally, varying only as specified by law. Consequently, under this head, discussion will be limited to a study of the special instruments of corporate indebtedness.

Corporate Net Worth. The accounting problems peculiar to corporations arise chiefly out of the concept of net worth, as established by law and financial usage. Consequently, the subject matter of this and following chapters is concerned with the interpretation of corporate net worth, in accordance with the following outline:

- I. Net worth
  - A. Capital contributions
  - B. Treatment of surplus
    - 1. Nature of surplus
    - 2. Reserves of surplus
    - 3. Adjustments of surplus
  - C. Dissolution
- II. Corporate indebtedness

Balance Sheet Peculiarities. A glance at the balance sheets of three concerns, one a sole proprietorship, one a partnership, and one a corporation, will show that the material differences lie in the presentation of net worth. The following is a reproduction of the net worth division of the balance sheet proposed by the American Institute of Accountants:

Net worth:

If a corporation—
- (*a*) Preferred stock (less stock in treasury)........................
- (*b*) Common stock (less stock in treasury) ....
- (*c*) Surplus:
  - Capital or paid in................ ....
  - Arising from revaluation of capital assets. ....
  - Earned (or deficit)..................................

If a person or a partnership—
- (*a*) Capital...
- (*b*) Undistributed profits or deficit............................

Other parts of this proposed balance sheet are equally filled out for the three types of organization, no alternative forms being needed.

This emphasizes the truth that legal, financial, and accounting problems peculiar to corporations are concerned largely with the treatment of net worth.

LEGAL CONSIDERATIONS

Capital Contributions

Promotion. Insofar as accounting is concerned, promotion is incidental. It is a pre-incorporation procedure which requires an accounting of its own. A promoter enters into contracts in order to get the proposed concern out of the embryo stage, hoping to transfer his interest therein to the corporation when he secures enough interested parties to contribute toward its formation. He exchanges the value of these preliminary services for an interest in the corporation, in accordance with the rule that such an interest may be paid for in services, money, or property.

Capital Stock. Capital stock and surplus are distinguishing characteristics of business corporations. Capital stock may or may not have a par value.

In case of par value capital stock, there attaches to each share an arbitrary valuation, say $50.00 or $100.00, as fixed by the charter.

In case of no par value capital stock no such arbitrary value appears, although a stated or minimum value may be required.

To illustrate, assume that the Georgian Corporation is to be organized and that interested persons are willing to contribute $150,000.00 in cash, services, and property. To anticipate future requirements for capital, as well as to meet present requirements, the application for a charter specifies that the authorized capital stock is to be $200,000.00, each share having a par value of $100.00. The charter provides accordingly.

Names of the three incorporators are listed below, together with their allotment of stock and the amount and character of the assets which each contributes.

Name	Amount of Stock Subscribed	How Paid for
L. K. Morton	*25,000.00*	*Promotion services*
S. L. Kramer	*90,000.00*	*Property*
L. L. Landis	*35,000.00*	*Cash*
	150,000.00	

Fully Paid Par Value Stock. Statutory provisions differ in the various states, but the usual requirement is that par value stock must be fully paid in to release the subscriber from further liability thereon.

This involves the question of the conservative valuation of assets, other than cash, turned over to the corporation in payment of subscriptions to its capital stock. Courts hesitate to question such valuations, except where grossly inflated; so the way is left open for material misstatements of facts, and consequent inequitable treatment of purchasers of stock for cash.

The valuation problem attaches to both Morton's and Kramer's contribution. If Kramer's property is worth, at a conservative valuation, only \$75,000.00; and if Morton's promotion services are in reality worth but \$20,000.00, it is obvious that the value attached to the capital stock of \$100.00 per share is fictitious; also, that Landis is paying excessively for his stock.

Treasury Stock. The difficulty in selling stock for cash at its par value, under circumstances similar to those illustrated above, has given rise to the device known as treasury stock.

One or more stockholders who have contributed heavily in property or services, or both, donate some of the stock thus acquired to the corporation's treasury. This is, in form at least, fully paid stock. By law, stock once fully paid up may, if reacquired by the issuing company, be reissued at a discount (below its par value) without subjecting the buyer thereof to any liability. By selling treasury stock for whatever it will bring, the corporation secures the necessary cash with which to carry on operations.

This procedure is frequently mere subterfuge, the law being lived up to in form, but violated in spirit, since the stock was originally exchanged for overvalued assets.

The abuse of treasury stock as a means of securing funds has been an important consideration on the part of the advocates of no par value stock.

Character of No-Par Value Stock. In a given instance the exact character of no-par value stock is fixed by the statutes of the state of incorporation. However, its more common characteristics may be summarized thus:

1. An arbitrary or fixed valuation is absent. In case of par value stock this is usually $50.00 or $100.00, but may be as low as $1.00, especially in case of highly speculative enterprises, such as mining.

2. In some instances no-par value stock is given a stated value, below which the selling price is not permitted to go. The New York law places this at $5.00. Usually, however, no stated value is required.

The general corporation law of Delaware (Sec. 14) provides that no-par value stock, common, preferred, or special, may be issued from time to time for "such consideration as may be fixed from time to time by the Board of Directors thereof, unless in the Certificate of Incorporation the power to fix such consideration shall have been reserved to the stockholders, in which event such power shall be exercised by the stockholders by consent in writing or by vote of the holders of record of two-thirds of the total number of each class of stock. . . ." By special provision the Delaware law empowers the directors alone to fix the consideration for the first issue of no-par value stock.

The Delaware law provides further that, "Any and all shares without par value so issued for which the consideration so fixed has been paid or delivered shall be deemed full paid stock and shall not be liable to any further call or assessments thereon, and the holders of such shares shall not be liable for any further payments in respect of such shares. . . ."

The general corporation law of Louisiana provides (Sec. 14):

"A certificate for shares having no par value shall not state any par value, nor any value thereof in money, except in liquidation or redemption, nor any rate of dividend to which such shares shall be entitled in terms of a percentage of any par or other value."

3. Since no-par value shares may be sold for whatever price the directors or stockholders determine, they cannot be issued at a discount, as is sometimes done in case of stock having a par value; hence the most common reason for the creation of treasury stock is obviated.

4 As indicated in the quotation from the Louisiana statute, above, no-par value stock is sometimes given a valuation in liquidation or redemption.

By value in liquidation is meant that the holders of no-par value shares are entitled to a fixed liquidating dividend per share, possibly before the holders of another class of stock receive anything.

By value in redemption is meant that no-par value stock may be retired or redeemed at a stated amount, say, $30.00 or $55.00, per share.

From the foregoing considerations it is evident that the rigid requirements attaching to par value stock are absent in case of no-par value stock. Unfortunately, not all of the favorable claims made by the advocates of no-par value stock have been resolved favorably.

Classes of Capital Stock. Capital stock, whether par value or no-par value, may be of one or more classes.

When capital stock is of but one class, each share being identical with all other shares as to powers and privileges, it is known as common stock, or simply stock.

When the shares are divided into two or more classes, each class being distinguished from the other class or classes by specialization or limitation as to powers and privileges, terminology varies. Following are typical cases:

Case 1. Company A incorporates with an authorized capital stock of $100,000.00. Each share of stock possesses the powers and privileges of every other share.

The entire issue is common, and on the balance sheet is designated simply as capital stock.

Case 2. Company B incorporates with an authorized capital stock of $200,000.00. It is all par value stock, but $100,000.00 of the stock is deprived of the voting privilege and, on the other hand, is given a certain priority in case of the liquidation of the corporation.

In this case the $100,000.00 of the stock that has the voting privilege is common, and the $100,000.00 that has liquidation priority, but no voting privilege, is preferred, being so classified on the balance sheet.

Case 3. Company C incorporates with an authorized issue of $100,000.00 par value stock and 20,000 shares of no-par value stock. Of the no-par value stock, 10,000 shares are granted priority in liquidation. The other 10,000 shares follow the foregoing preferred shares as to priority in liquidation, but precede the common shares having par value.

In this case $100,000.00 of the stock is common; the other two groups would be given some such designation as

No par preferred—Class A
No par preferred—Class B

In practice, the powers, privileges and limitations applicable to each class of stock are sometimes prescribed in great detail.

Corporate Surplus

Corporate Earnings. The net profit of a corporation is arrived at in the same manner as is that of a sole proprietorship or a partnership.

However, the balance of net profit is not carried to the capital stock account, which would be similar to the procedure of carrying

it to the Capital account of a sole proprietor. Instead, it is carried to a distinct account termed: (1) Surplus, or (2) Earned Surplus, or (3) Profit Derived from Operations.

Other titles are sometimes employed, but in any event the meaning is the same, viz., that net profit is accumulated in a separate account, so that the Capital Stock account may remain unchanged after being credited with the selling pricc of the stock.

The general corporation laws of the various states are more or less specific in laying down requirements as to treatment of surplus. The recently enacted laws of Delaware, Michigan, Pennsylvania, and Illinois are especially minute in this respect.

Detailed consideration of surplus is found in later chapters.

Corporate Charter

Statutory Requirements. Incorporation procedure is prescribed in the laws of the various states. Section 1 of the general corporation law of Delaware reads:

"Any number of persons, not less than three, may associate to establish a corporation for the transaction of any lawful business, or to promote or conduct any legitimate objects or purposes under the provisions of and subject to the requirements of this chapter, as hereinafter provided. . . ."

The Delaware law provides further (Section 5) that the certificate of incorporation (charter) shall set forth:

1. The name of the corporation, which must be such as to be distinguishable from the names of other corporations organized under the laws of the state.
2. The name of the county, city, town or place, within the county in which its principal office or place of business is to be located; also the name of its resident agent, which agent may be either an individual or a corporation.
3. The nature of the business, or objects or purposes to be transacted, or carried on.
4. If the corporation is to issue but one class of stock, the number of shares authorized, and (*a*) the par value of each of such shares, or (*b*) a statement that all such shares are to be without par value; or, if the corporation is to be authorized to issue more than one class of stock, the total number of shares of all classes of stock which the corporation is authorized to issue and (*a*) the number of the shares of each class thereof that are to have a par value and the par value of each share of each such class, and (*b*) the number of shares that are to be without par value and (*c*) a statement of all or any of the designations and powers, preferences and rights, and the qualifications, limitations or restrictions thereof, which are permitted, by the laws of Delaware, in respect of any class or classes of the stock of the corporation.

Also the minimum amount of capital, in no case less than $1,000.00, must be set forth.

5. The name and place of residence of each incorporator.

6. Whether or not the corporation is to have perpetual existence; if not, the date of commencement of its existence and the date when its existence shall cease.

7. Whether the private property of the stockholders shall be subject to the payment of corporate debts, and if so, to what extent.

8. Any provision which the incorporators may choose to insert for the management of the business and for the conduct of the affairs of the corporation, and any provisions creating, defining, limiting and regulating the powers of the corporation, the directors and the stockholders, or any class of the stockholders; provided, such provisions are not contrary to the laws of the state.

9. Provision is made here for incorporation in the charter of a statement relative to the jurisdiction of Delaware courts in case of a compromise or arrangement between the corporation and its creditors, or between the corporation and its stockholders.

10. Such provisions as are desirable limiting or denying to the stockholders the preemptive right to subscribe to any or all additional issues of stock, of any or all classes.

11. Provisions requiring for any corporate action the vote of a larger proportion of the stock or any class thereof than is required by the laws of Delaware.

Chapter 9

CAPITAL STOCK

Corporate Net Worth. Since capital stock is peculiar to the corporation and since it is a means of securing proprietary funds for developmental and operating purposes, it is necessary, at this point, to consider some of the aspects of corporate net worth. Every business secures its funds from equity holders. An equity holder is one who has a legal interest in the assets of the corporation. Thus, not only the stockholders but bondholders, as well as unsecured creditors, are equity holders. Some accountants go as far as to insist that the boundary between net worth, represented by the equity of stockholders, and direct liabilities, represented by equities of the bondholders and other creditors, is more or less vague. The trend appears to be, however, in the direction of recognizing definite differences between the equity of the stockholders and the equity of the creditors.

When a promoter is attempting to secure the organization of a corporation, he expects to secure the funds required to start the corporation on its career through sale of capital stock. The promotor himself accepts his compensation in the form of common capital stock. This is because he must show faith in the corporation which he promotes. The subscribers to the capital stock of the new corporation bear great risks, but also enjoy the prospect of speculative and other gains. They are the entrepreneurs who carry upon their shoulders the basic risks of industry. The capital stock, after it has been issued and fully paid, represents the net worth or proprietorship of a corporation. The corporation is distinctly a statutory creation, and the same is true of capital stock, which is a distinguishing feature of corporate accounting.

Formerly, it was customary for corporations to sell only capital stock having a par value, but at the present time capital stock without par value is popular. In any event, the capital stock sold repre-

sents a fixed sum contributed by the stockholders and intended to be retained permanently in the undertaking. It is generally held that this fixed sum, representing the original investment of the stockholders, should be definitely distinguished from accretions to net worth in the form of profits. As a consequence, there are two recognized basic accounts employed to indicate the amount of corporate net worth, namely, the Capital Stock account and the Surplus account. Whereas the Capital Stock account is relatively fixed in amount, the Surplus account naturally fluctuates from time to time, because to this account must be charged dividends declared, and sums transferred to net worth accounts, such as the Reserve for Contingencies account, or the Reserve for Betterments account.

The Capital Stock account, the Surplus account, and surplus reserve accounts represent the proprietorship interest of as many stockholders as happen to have invested money in the corporation. Sometimes the stockholders are numbered in thousands, or even hundreds of thousands. Therefore, in case of the corporation, the net worth equity may be very widely distributed; for example, the stockholders of the American Telephone and Telegraph Company number more than one-half million. It is evident, therefore, that the corporate equity is not only to be distinguished from the equity of a partnership or a sole proprietorship by the manner in which it is expressed in the accounts, but also by the manner in which it is distributed among investors. At one time the investment of stockholders, as represented by the Capital Stock account, was looked upon as a trust fund maintained for the protection of the creditors. Although the trust fund theory of capital stock is now discredited, it is not inappropriate to regard the investment of the stockholders as a fund which should be maintained for the protection of creditors. In fact, creditors have the right to expect that the stockholders' investment will be maintained. If it is reduced through excessive dividend payments, or through the redemption of outstanding capital stock, the creditors' position is to that extent weakened. The status of surplus is different. It is generally understood that all surplus resulting from profits may be distributed to the stockholders as dividends. The primary duty of the manager of a corporation is

to maintain the original investment. It may be desirable to add to this investment through the retention of surplus, or through the capitalization of surplus by the issuance of additional capital stock.

Nature of Capital Stock. Owing to the part which capital stock plays in the financing of corporations, it is necessary to secure a full understanding of its exact nature in order that the proper accounting procedure in connection with it may be followed. Capital stock is, essentially, the creation of law, and to ascertain the exact legal status of the capital stock of a given corporation it is necessary to consult the corporation laws of the state of incorporation. Thus some states permit the sale of capital stock at a discount, but this represents an exception to the general rule that capital stock must be paid in full. The present status of capital stock represents the development of corporation law and finance over a long period of years. Naturally, certain changes have been effected. Thus, one who holds voting stock has one vote for each share of stock, whereas, formerly, each stockholder had one vote regardless of the number of shares owned. A relatively recent development in the field of capital stock has been the introduction of capital stock without par value—the result of changing financial conditions.

The fundamental provisions relative to the capital stock of a given corporation are determined by the corporation law of the state of incorporation, and by whatever provisions it may be necessary to include in the corporation's charter relative to capital stock. The application for the charter must state what kinds of capital stock are desired and the exact amount of each kind which is to be authorized. If there is but one kind of stock, it is necessarily called common stock, because all of it has common rights. If more than one kind of stock is required, there will be an issue of common stock together with one or more issues of preferred stock. Sometimes special classes of capital stock fall outside the divisions of common stock and preferred stock; these are exceptional and need not be considered at this point. As to whether the stock shall be par value or no par value, the provisions of the law of the various states are as a rule liberal, so that the incorporators usually have no difficulty in fixing upon a combination of such kinds of capital stock as will meet their requirements.

In case of par value capital stock, the number of shares and the par value of each share must be stated in the charter. Thus if 1,000 shares of capital stock, having a par value of $100.00 each, are authorized by the charter, this will be so stated. In case of capital stock without par value, no amount of dollars can be stated, but the number of shares authorized to be issued will be stated. In no case may a corporation issue more shares than are authorized. Should it do so, the excess shares will be void. Authorized unissued stock represents merely the privilege which the state grants to the corporation to issue stock. It is not an asset, and a corporation which has sold or otherwise issued no stock is said to be merely in a position to proceed with the work of organization.

Subscriptions to Capital Stock. Up until the time when the charter is issued, the corporation exists only as a future possibility in the minds of those interested in its promotion. It is the function of the promoter of a corporation to first satisfy himself that the project is a feasible one, and then to present the results of his investigation to those whom he intends to interest in the project. Before doing so, it is necessary to determine with approximate accuracy what funds will be needed and from what sources they are to be secured. Naturally, the funds of a newly created corporation will be secured largely from those willing to purchase its capital stock. Recourse to the sale of bonds and to bank loans may be had at a later point in the corporation's history. Those persons who are willing to purchase the capital stock of the newly incorporated enterprise become subscribers and their signatures to the subscription list render them legally liable to the corporation for the payment of the shares to which they subscribe.

The terms under which the subscriber is bound determine the manner in which he will pay his subscription. Sometimes subscriptions are paid in full in cash, but more frequently they are made payable in installments, or on call. Where subscriptions are paid in cash the capital stock may be issued immediately upon payment, but where subscriptions are payable in installments or on call, it is customary to give to the subscriber receipts for all except the last payment, or the last call, when he surrenders his receipts and receives the fully paid stock certificate.

Assume that a corporation secures subscribers to $50,000.00 of its capital stock payable immediately in cash. The following entry will be sufficient to record the essential facts:

July 1, 19—		
Cash	*50,000.00*	
Capital Stock		*50,000.00*
For payment in full of capital stock.		

Where the installment method is followed, a somewhat different procedure is necessary. Assume that a corporation secures subscribers to $50,000.00 in capital stock, $20,000.00 payable immediately, and two installments of $15,000.00, each payable, respectively, one month and two months after the date the subscription list is completed. If the subscription list is completed on March 1, the following entry is in order:

March 1, 19—		
Subscribers to Capital Stock	*50,000.00*	
Capital Stock Subscribed		*50,000.00*
To record subscriptions to capital stock payable 20,000.00 at this date, and 15,000.00 on April 1 and May 1, respectively.		

Since $20,000.00 is paid immediately by the subscribers, the following entry is in order:

March 1, 19—		
Cash	*20,000.00*	
Subscribers to Capital Stock		*20,000.00*
For down payment of 50,000.00 of capital stock subscribed.		

On April 1 the entry is:

April 1, 19—		
Cash	*15,000.00*	
Subscribers to Capital Stock		*15,000.00*
For installment on capital stock due and paid today.		

The entry on May 1 is:

May 1, 19—		
Cash	*15,000.00*	
Subscribers to Capital Stock		*15,000.00*
For installment on capital stock due and paid today.		

Since the subscriptions are now fully paid, the capital stock is issued upon the surrender by the subscribers of their receipts, which

were given them when the first and second payments were made. The entry required at this time is as follows:

May 1, 19—		
Capital Stock Subscribed	*50,000.00*	
Capital Stock		*50,000.00*
To record the issue of capital stock having a par value of 50,000.00 on which payments amounting to 50,000.00 have been received.		

Payments Other than in Cash. In the preceding illustration the stock was paid in full in cash. There are two other media of payments on capital stock, namely, property and services. Of course, in case of a given issue, the payment might be made partly in cash, partly in property, and partly in services. Since it is customary for the promoter to accept payment for his services in common stock, it is evident that his subscription to the capital stock of the newly organized corporation will actually be paid in services. Thus if the promoter's services are valued at $10,000.00, this amount of common stock will be issued to the promoter. The following entry is illustrative of the accounting procedure involved:

July 1, 19—		
Organization Expense	*10,000.00*	
Capital Stock		*10,000.00*
For promotion services in connection with the organization of this corporation.		

It is apparent that where capital stock is issued for services there arises the important problem of valuation. It is difficult to determine the exact worth of a promoter's services because of the values involved; hence there arises the problem of fair valuation, since either overvaluation or undervaluation is likely to affect unfavorably the interest of other parties such as stockholders who paid for their stock in cash or creditors who are entitled to look upon the capital stock as a fund available for their protection. Where capital stock is issued for services or property equal to its par value, the overvaluation either of services or of property will take the form of a subterfuge whereby the letter of the law is observed but its spirit is broken.

Frequently, when a corporation is organized to absorb an existing business, or where additional issues of stock are made to purchase other property, there arises the problem of valuation. In

such a case this problem is likely to be one of major importance because the amount of the property is likely to be relatively large. The appraisal of such properties with a view to their purchase involves the consideration of intangible value, such as goodwill and going concern value. Here, in particular, there arises an opportunity to inflate values, with the result that after the purchase of the asset has been accomplished through the issuance of stock there exists a material amount of *water* in the stock. That is, in effect, the stock is not fully paid, although on the face of the matter it appears to be.

The determination of the value of assets accepted by a corporation in payment of its capital stock lies with the board of directors. In view of the fact that even expert appraisers disagree widely as to the value of specific assets, it is evident that the courts will not interfere except where the overvaluation of the assets is extreme. For example, if a corporation were to accept certain assets at a valuation of $500,000.00, but which an independent board of appraisers values at $300,000.00, it is not likely that any court action would follow. Nevertheless, there would result a very large amount of underpayment in the case of stock issued in exchange for such assets.

Illustration. To illustrate some of the problems involved in connection with the issuance of capital stock for property, assume that Corporation A absorbs Corporation B by exchanging new stock of Corporation A for the outstanding stock of Corporation B. Before any part of the procedure is effected, the balance sheet of Corporation B stands as follows, assuming that the date on which the purchase is to take place is December 31, 19—. See Fig. 42.

If the balance sheet shown in Fig. 42 is based on the conservative valuation of assets, the net worth of Corporation B is the sum of the capital stock, $50,000.00, and surplus, $8,985.00, or $58,985.00. The presence of the item of goodwill, $25,000.00, would naturally lead to investigation, and it is doubtful whether Corporation A would be willing to pay for the face amount of this item. Of course, much depends on the earning power of Corporation B. More information than is shown in a single balance sheet is necessary to enable Corporation A to arrive at the true valuation of Corporation B. In addition to the consideration of goodwill, attention will be given to

Corporation B

BALANCE SHEET

as at December 31, 19—

Assets			*Liabilities*	
Cash		$ 5,000.00	Accounts Payable	$ 4,500.00
Accounts Receivable		17,000.00	Accrued Wages	125.00
Notes Receivable		8,000.00	Accrued Taxes	390.00
Inventory		15,000.00	Bonds Payable	30,000.00
Building	$25,000.00			
Less Depreciation Reserve	4,500.00	20,500.00	*Capital*	
			Capital Stock	50,000.00
Furniture and Fixtures	3,000.00		Surplus	8,985.00
Less Depreciation Reserve	600.00	2,400.00		
Delivery Equipment	1,800.00			
Less Depreciation Reserve	700.00	1,100.00		
Goodwill		25,000.00		
		$94,000.00		$94,000.00

Fig. 42

the other assets. The accounts receivable will be analyzed, and perhaps a deduction will be made for bad and doubtful accounts. Both overdue accounts receivable and overdue notes will be considered. The inventory will be examined with a view to determining the method of valuation employed and also with a view to proper provision for obsolete items. The Building account will be considered with reference to the propriety of all charges made thereto, and also with reference to the amount of accrued depreciation as reflected in the Reserve for Depreciation account.

Assume that after a detailed investigation of asset values has been made it is decided, for purposes of purchase, to reduce asset values as follows:

Name	Book Value	Appraised Value
Accounts Receivable	*17,000.00*	*15,000.00*
Notes Receivable	*8,000.00*	*7,000.00*
Inventory	*15,000.00*	*15,000.00*
Building	*20,500.00*	*18,000.00*
Furniture and Fixtures	*2,400.00*	*2,000.00*
Delivery Equipment	*1,100.00*	*800.00*
Goodwill	*25,000.00*	*0.00*
	89,000.00	*57,800.00*

The total reduction from book values amounts to $89,000.00 minus $57,800.00, or $31,200.00. The net worth, as shown on the balance sheet in Figure 42, is $58,985.00. To determine what Corporation A will pay for Corporation B, this amount, namely $58,985.00, must be reduced by $31,200.00, which leaves $27,785.00. Therefore Corporation A will issue 277 shares of capital stock, each share having a par value of $100.00, and in addition pay $85.00 in cash, thus making up the total of $27,785.00. The entry on the books of Corporation A, for the purchase of the assets and the assumption of the liabilities of Corporation B, is as follows:

Dec. 31, 19—		
Cash	5,000.00	
Notes Receivable	7,000.00	
Accounts Receivable	15,000.00	
Inventory	15,000.00	
Building	18,000.00	
Furniture and Fixtures	2,000.00	
Delivery Equipment	800.00	
Accounts Payable		4,500.00
Accrued Wages		125.00
Accrued Taxes		390.00
Bonds Payable		30,000.00
Capital Stock		27,700.00
Cash		85.00
For purchase of assets and assumption of liabilities of Corporation B.		

There may be some inconsistency in showing cash as an item purchased; in practice, this might not be included in the assets, in which case the capital stock issued in payment would be $22,700.00 instead of $27,700.00. It is evident that perfection in appraisals is impossible for the reason that two expert appraisers making independent appraisals of the same property are almost certain to arrive at different results. The most that can be expected is that appraisals will be carefully and conservatively made, so that gross overvaluations of property will be avoided.

Preferred Stock. When capital stock is all of one kind it is known as common stock. Sometimes, however, it is necessary or desirable to issue more than one class of capital stock. Thus, if a corporation has outstanding $1,000,000.00 in common stock, it may find that conditions are such as to make it impossible to sell additional amounts of the same stock. This is likely to be the case

when a corporation is not enjoying great prosperity. The holders of the common stock must therefore make certain concessions to prospective investors. This they may do by issuing preferred capital stock. Preferred stock is so called because it has certain features which distinguish it from the common stock. The usual preference is that which relates to dividends. Thus it might be agreed that the new issue of stock shall receive a dividend at a specified rate before any dividend is paid on the common stock. If this dividend rate is set at 6 per cent, the stock is known as 6 per cent preferred capital stock. Dividends on preferred stock, like dividends on common stock, can be paid only where there is an available surplus. Preferred stock possesses the voting privilege unless it is specifically denied. This, however, is usually the case; although provision may be made to the effect that preferred stockholders will be given the power to vote in the event that the dividend on the preferred stock goes unpaid.

Owing to the fact that common stockholders control the corporation, the preferred stockholders are at a certain disadvantage. The common stockholders might manipulate the accounts in such a manner that no surplus would be available for the payment of the preferred dividend in a given year; then in the next year they might manipulate the accounts so as to overstate profits, thus making it possible to pay not only the current dividend on the preferred stock but, in addition, a very large dividend on the common stock. Thus in some years the preferred stockholders would receive no dividend. To make impossible such procedure, and to guarantee to the preferred stockholders the dividend on their stock, preferred stock is frequently made cumulative. This means that if a dividend is passed in any year it becomes a lien on future profits. Unpaid back dividends on the preferred stock must therefore be paid before any dividend can be paid on the common stock. The cumulative feature is one which many investors demand, since they feel that it eliminates much of the risk which otherwise is inherent in preferred stock.

An illustration will serve to make clear the important features of preferred stock. Assume that Corporation X has a net worth structure as follows:

Capital Stock

Common	500,000.00	
Preferred (6 per cent Cumulative)	200,000.00	
Surplus	150,000.00	850,000.00

At the meeting of the board of directors in January it is voted to pay the 6 per cent dividend on the preferred stock and to pay a dividend of 10 per cent on the common stock. The entry to reflect the declaration of the dividend is as follows:

Surplus	62,000.00	
Dividends Payable—Common Stock		50,000.00
Dividends Payable—Preferred Stock		12,000.00
For dividend declared on January 16, see minute book, page —.		

The declaration of this dividend reduces surplus from $150,000.00 to $88,000.00. It also sets up two liabilities, one of $50,000.00 representing the dividend payable on the common stock, and one of $12,000.00 representing the dividend payable on the preferred stock. Next, assume that in the following year the corporation incurs a loss of $70,000.00. This reduces surplus to $18,000.00, and the board of directors at their annual meeting passes a resolution declaring the usual 6 per cent dividend on the preferred stock, but no dividend is declared on the common stock. The journal entry reflecting this procedure is as follows:

Surplus	72,000.00	
Dividend Payable—Preferred Stock		12,000.00
Per resolution of board of directors, see minute book, page —.		

Next, assume that in the next year a net loss of $15,000.00 is incurred. This results in a debit balance in the Surplus account so that nothing is available for the payment of dividends. No dividend is declared. In the next year a net profit of $50,000.00 is made, leaving a balance in Surplus account of $41,000.00. Of this amount $24,000.00 is needed to pay the dividend for two years on the preferred stock, bringing the payments up to date. The journal entry is:

Surplus	24,000.00	
Dividends Payable		24,000.00
For dividend on preferred stock for current year and year preceding, when dividend was passed, see minute book, page —.		

Since there remains only $17,000.00 in the Surplus account the board of directors decides that no dividend should be paid on the common stock.

Sometimes preferred stock is made participating. This means that after the contractual rate of dividend is paid on the preferred stock it participates equally with the common stock in any further distributions which may be made. To illustrate, assume that Corporation N has the following capital structure:

Capital Stock

Common	*500,000.00*		
Preferred	*250,000.00*	*750,000.00*	
Surplus		*200,000.00*	*950,000.00*

Assume further that the preferred stock is 6 per cent cumulative participating, and that there are no dividends in arrears. The board of directors declares a dividend of 6 per cent on the preferred stock. This amounts to \$15,000.00 and leaves free surplus of \$185,000.00. Any further dividend which the board of directors may declare must be divided between the common and preferred stock, share for share. Assume that the board of directors decides to declare a dividend of 10 per cent. The entries to reflect both dividends are as follows:

Surplus	*15,000.00*	
Dividends Payable—Preferred Stock		*15,000.00*
For dividend on preferred stock at the contractual rate of 6 per cent.		
Surplus	*75,000.00*	
Dividends Payable—Common Stock		*50,000.00*
Dividends Payable—Preferred Stock		*25,000.00*
For dividend of 10 per cent on common stock and participating dividend of 10 per cent on preferred stock.		

It is evident that the participating feature adds a speculative aspect which nonparticipating preferred stock does not have. It may therefore be regarded as an additional attraction to investors and speculators—one which the corporation which issues such stock may be compelled to offer in order to secure a market for its stock.

As has been stated, preferred stock does not usually possess the voting privilege, but this is only because it is specifically withheld. Sometimes provision is made to the effect that the preferred stock will be given the voting privilege in the event that dividends thereon are passed. This feature gives to the holders of preferred stock certain rights of control under the conditions specified.

Sometimes preferred stock is preferred both as to profits and as to assets. The meaning of preference as to profits has been ex-

plained. By preference as to assets is meant that, in the event of liquidation of the corporation, the preferred stockholders will receive their investment before anything is paid to the common stockholders. To illustrate, assume that Corporation B has the following net worth structure:

Capital Stock

Common	*400,000.00*		
Preferred	*200,000.00*	*600,000.00*	
Surplus		*20,000.00*	*20,000.00*

In the event of liquidation, liquidating dividends, which are simply a return of investment, will be paid to the preferred stockholders, until their entire investment of $200,000.00 is returned, before the holders of the common stock will receive any liquidating dividend. Owing to the fact that liquidation is usually accompanied by great shrinkage in asset values it is evident that this proviso gives the preferred stock a distinct advantage over the common stock. In fact, the liquidation losses may be so heavy that the equity of the common stock will be entirely wiped out, and even the equity of the preferred stock may be reduced if not cancelled entirely.

Capital Stock Sold at a Discount. In some states the corporation laws provide that capital stock may be sold at a discount. In the nature of things this is somewhat illogical because the par value of capital stock is regarded as a kind of guaranty that the stock has been issued for cash, services, or property which, when conservatively valued, represents at least the amount expressed by the par value of the stock. The so-called trust fund theory of capital stock held that the amount invested by the stockholders represented a trust fund for the benefit of the creditors of the corporation. Although this theory has been discounted in so far as its technical accuracy is concerned, it is true, nevertheless, that the amount invested by the stockholders does provide a guaranty to which the creditors may look for the ultimate satisfaction of their claims. Therefore if capital stock is issued for less than its par value, the facts are misrepresented in the balance sheet unless the amount of the discount is clearly expressed.

Suppose that a corporation issues $100,000.00 in capital stock for $90,000.00 in cash. The entry is as follows:

Cash	*90,000.00*	
Discount on Capital Stock	*10,000.00*	
Capital Stock		*100,000.00*
For sale of capital stock at a discount of 10 per cent.		

The best way to express the facts on the balance sheet is to subtract the discount from the par value of the capital stock, as follows:

Capital Stock	$100,000.00	
Less Discount	10,000.00	90,000.00

Even though the situation is exprcssed as shown in the illustration, there still remains doubt as to the ability of the corporation or the corporation's creditors to collect this discount, especially where a long period of time has intervened since the sale of the stock. It is to avoid the difficulties which arise when capital stock is exchanged for assets and services at inflated valuations, and the problems that arise in connection with the sale of capital stock at a discount, that stock without par value has been devised.

No-Par Value Capital Stock. No-par value capital stock has no expressed valuation, as is the case with capital stock having a par value. It has grown popular during the last two or three decades and is now employed by many large corporations. The general corporation laws of all the states make provision for the issuance of capital stock without par value. Perhaps the most notable feature of no-par value stock is that it may be sold for what it will bring, without reference to any particular valuation per share. It is true that in some cases a so-called stated value is required, but this is merely a minimum figure below which it cannot be sold. Ordinarily, it will be sold for a figure much greater than stated value. Thus, most corporations which secure thc authorization of no-par value stock in their charters with a stated value of $5.00 per share will expect to sell the stock at perhaps $60.00, $70.00, or $80.00 per share.

Since it is usually not desirable to sell an entire authorized issue of capital stock at one time, it is possible to sell a portion of an issue at a given price and then, at a later date, sell another portion of the same issue at a different price. In this way no-par value capital stock is adjustable to market conditions whereas to some extent, at least, par value capital stock is not because it cannot be sold for less than its par value.

To illustrate some of the features of no-par value capital stock, assume that a corporation secures the authorization of an issue of 10,000 shares of no-par value common stock. On January 15, 19— it disposes of 5,000 shares of this stock at $75.00 per share, or a total of $375,000.00. A year later it sells the remaining 5,000 shares at $80.00 per share, or a total of $400,000.00. The facts relative to this issue may be summarized as follows:

No-Par Value Capital Stock	
10,000 Shares Outstanding	*775,000.00*

When no-par value capital stock is employed, care should be taken to make the same distinction between capital stock and surplus as is done in case of par value capital stock. The amount received upon the sale of capital stock, whether par value or no par value, represents a contribution of capital by those who purchased the stock. No part of this contribution is profit and no part of it is subject to transfer to some other account, as is the case with surplus. The Surplus account does not represent a contribution of capital by the stockholders; instead it represents the growth of net worth resulting from successful operating and sometimes nonoperating transactions. When no-par value capital stock first began to be employed there was some confusion on this point, and by mistake the surplus that had accumulated previous to the issuance of no-par value capital stock was transferred to the No-Par Value Capital Stock account. With the development of a clearer understanding of the nature of capital stock, such errors have been avoided, so that the advantages of its employment usually outweigh any accompanying disadvantages.

Frequently, no-par value capital stock is issued in conjunction with par value capital stock. When this is done the usual setup is to issue common stock of no-par value, and preferred stock having a designated par value. Sometimes, however, the distinction between two classes of stock is indicated in some other way, thus, there might be no-par stock class A and no-par stock class B. The class B might, in effect, be preferred stock. There are many possibilities in respect to variations in the capital structure of a corporation, but it is unnecessary to attempt to describe these here. In making application for authorized issues of capital stock in connection with the application for its charter, the promoters of a corporation must con-

sider many things, among these being the nature of the proposed undertaking, the likelihood of future growth, the market in which the stock must be sold, and the business conditions at the time. In case of a small corporation whose stock will be closely held there is usually no reason for complicating the capital structure by employing two or more kinds of capital stock. The charges which must be made in this respect after a corporation begins operations must be related to business conditions and the requirements of the corporation in question. Sometimes careful consideration of circumstances is necessary to determine whether it is better to sell bonds or to sell preferred stock. As a rule, a corporation prefers to sell capital stock than to issue bonds, but there are circumstances in which an issue of bonds is preferable. If a corporation's earning power is stable, and if it is able to earn 10 per cent on invested money, it is evident that within certain limits the sale of bonds to secure additional capital is advantageous. The interest rate is not likely to be in excess of 6 per cent on bonds, with the result that after interest is paid the earnings made possible through the use of the borrowed money result in a margin of profit of 4 per cent, which accrues to the stockholders. This procedure, whereby money is borrowed at a lower rate of interest and employed to earn a higher rate of income, is known as trading on the equity. As long as the temptation to issue excessive amounts of bonds is resisted, the results are usually beneficial. When, however, the bonded indebtedness of a corporation becomes excessive, the danger that the corporation will be unable to earn enough to meet interest and principal obligations becomes serious.

Illustration. In Fig. 43 is shown the capital stock, capital surplus, and earned surplus as expressed in the consolidated balance sheet of the Hercules Powder Company, dated June 30, 1940.

Capital Stock	
6 per cent Cumulative Preferred, Par Value $100.00	$ 9,619,400.00
(Authorized 200,000 shares, Issued 96,194 shares.)	
Common, No Par Value....	16,945,850.00
(Authorized 1,600,000 Shares, of which 49,465 Shares are reserved under the Company's charter for sale to employees. Issued 1,355,668 Shares.)	
Capital Surplus.................	4,112,455 95
Earned Surplus..	12,611,506.58

Fig. 43

Chapter 10

SURPLUS

Nature of Surplus. Surplus is a kind of balancing account, since it represents the excess of the assets over liabilities plus capital stock. Due to the difference in origin of certain types of surplus, it may be necessary to have more than one Surplus account. Surplus is invariably a part of net worth. Since it is used usually only in corporation accounting, it appears only on corporation balance sheets. An extremely simple setup of the net worth division of a corporation balance sheet is shown in Fig. 44:

Net Worth

Capital Stock.	$500,000.00	
Surplus	120,000.00	$620,000.00

Fig. 44

Such a statement as that shown in Fig. 44 leaves unexplained certain things which the reader of the balance sheet should know. It is usually impossible, on the balance sheet itself, to present the desired information; hence, the custom in many concerns of showing the details relative to surplus in what is known as a statement of surplus. Surplus should be explained as to both origin and use. In the Surplus account in the ledger the origin of the surplus should be explained on the credit side. The uses to which surplus are put are shown on the debit side of the Surplus account, except in case of surplus which is retained in the business and not transferred to any other account. If surplus is used to pay dividends, the fact of this use is expressed on the debit side of the Surplus account. If part of the surplus is transferred to a reserve for contingencies, this is shown on the debit side of the Surplus account. If nothing is done with surplus except to retain it in the business, this fact is not expressed on the debit side of the Surplus account, but it may easily be inferred from an examination of the Surplus account. To illustrate the prin-

ciples stated above, assume that the Surplus account of a corporation appears as shown in Fig. 45.

Surplus

19—		19—	
Jan. 15 Dividends Payable	*200,000.00*	*Dec 31 Profit and Loss . . . . .*	*600,000 00*

Fig. 45

An examination of this Surplus account indicates that the entire amount of the surplus, namely $600,000.00, is operating profit, and that of this amount $200,000.00 has been used to pay dividends. Although nothing is indicated in the account as to the use to which the balance of $400,000.00 has been put, it is evident that this remains in the business.

It is sometimes asked whether surplus retained in the business can be traced to specific assets, or whether it must simply be regarded as being diffused throughout all the assets, making their total amount greater than would be the case if there were no surplus. As a rule, it is unnecessary to attempt to trace surplus in the manner suggested. Generally, it may be said that an increase in earned surplus takes the form of an increase in working capital, but this situation may not remain since working capital may in turn be reduced through the purchase or construction of fixed assets.

Much attention should be given to the classification of the sources and uses of surplus. Unfortunately, accountants themselves are unable to agree on some aspects of surplus. Also, in practice, there is frequently found a tendency to fall short of the application of some of the fundamental principles which accountants generally do recognize.

Surplus Classification. Surplus must be divided into its natural classes. There must be some reason for distinguishing one branch of surplus from another. The cause which created the surplus is this reason. Thus, surplus which results from operations should be called "earned surplus," and surplus which results from gifts should be called "donated surplus." Listed according to the significant sources of origin, the divisions of surplus are classified as: (1) earned surplus, (2) capital surplus, (3) paid-in surplus, (4) donated surplus, (5) unearned surplus.

In Fig. 46 is given a detailed cxplanation of the sources and uses of these five divisions of surplus.

CLASSES, SOURCES, AND USES OF SURPLUS

Class	Sources	Uses
(1) Earned Surplus	(*a*) Operating net profits. (*b*) Nonoperating profit, arising from the sale of fixed assets, or investments, and from other extraneous transactions.	(*a*) To pay cash dividends. To pay stock dividends. To absorb losses. To provide for expansion.* To provide for contingencies.* To provide working capital.*
(2) Capital Surplus	(*a*) Profit on treasury stock sales. (*b*) Capital stock assessments (*c*) Capital stock conversions. (*d*) Forfeiture of stock subscriptions.	(*b*) To pay cash dividends. To pay stock dividends. To provide for expansion.* To provide for contingencies.* To provide working capital.*
(3) Paid-In Surplus	(*a*) Sale of par value stock at a premium. (*b*) Sale of no par stock above stated value.	(*c*) To provide for expansion.* To provide for contingencies.* To provide working capital.*
(4) Donated Surplus	(*a*) Capital stock returned to the treasury. (*b*) Gifts of assets. (*c*) Capital stock assessments.	(*d*) To provide for expansion.* To provide for contingencies.* To provide working capital.*
(5) Unearned Surplus	(*a*) Revaluation of assets.	(*e*) To pay stock dividends.

Fig. 46

The preceding table of classes, sources, and uses of surplus requires explanation. Under *Sources* is explained the manner in which the various kinds of surplus originate. Under *Uses* is explained the way in which surplus is accounted for, either by being paid out or by being retained in the business. It will be noted that some of the uses are marked with an asterisk (*). Wherever this mark occurs it means that the surplus so employed is retained in the business, and that consequently this use of surplus is not expressed as a debit in the Surplus account. It should be noted that, in some instances, the retention of surplus in the business is practically necessary because of its origin. This is true, for example, of paid-in surplus and donated surplus.

Earned Surplus. Earned surplus consists of accumulated profit, either operating or nonoperating, which is retained in the business. When the word *surplus* is used without qualification it is reasonable to assume that earned surplus is meant. Either cash dividends or stock dividends may be declared from earned surplus, and operating losses should be absorbed in the Earned Surplus account. Earned surplus may be reserved for various purposes, such as to meet future contingencies or to provide for a building program. Since surplus is a balancing figure on the balance sheet, its correct statement is necessarily dependent upon the correct showing of all assets and liabilities, which means also that all items of expense and all items of income must be treated correctly. Closely related to the correct showing of surplus is the problem of allocation of income and expense to the proper accounting period. There is also involved the correct showing of all reserves. Thus, if the reserve for bad debts is overstated, surplus is understated to the same extent, and if the reserve for depreciation is understated, surplus is overstated.

Some attempt has been made on the part of state legislatures to specify the nature of surplus and the way in which the various kinds of surplus may be used. As a rule, it will be found that these attempts to explain surplus are inadequate and in some instances erroneous because of lack of knowledge of accounting on the part of the lawmakers.

The usual credits to the Earned Surplus account occur when the books are closed at the end of the accounting period, transfers being made from the Profit and Loss account. Debits to the Earned Surplus account may result from any of the uses indicated in the foregoing tabulation and may be made at any time during the year. A net operating loss results in a debit to the Earned Surplus account, and this must of course be entered at the closing date. Insofar as possible, current or interim entries in the Earned Surplus account should be avoided; thus, this practice might be carried to the absurd extent of entering all current items of expense and income in the Earned Surplus account. It is better to carry even unusual items in special accounts, so that the entries made in the Earned Surplus account at the end of the period may represent the highest possible degree of summarization.

Earned surplus, unless it has been specifically appropriated for indicated purposes, is free surplus and therefore available for paying either cash dividends or stock dividends. There is no objection to the appropriation of earned surplus for specific purposes other than the fact that multiplication of this procedure is inadvisable. As a rule, not more than two or three reservations of earned surplus should be made. Where an exceptional number of such reservations are made, the situation becomes confused and there is a temptation on the part of the board of directors to reverse its procedure in some instances, thus transferring the reserved surplus back to the Earned Surplus account. This is said without reference to contractual obligations which provide for the reservation of earned surplus. Where such obligation exists it must be fulfilled whether or not a policy established at the time the contract was made is a good one.

Capital Surplus. The sources and uses of capital surplus are indicated in the tabulation shown in Fig. 46. These sources are in the disposition of treasury stock, assessments upon stockholders, increases resulting from the conversion of one class of capital stock into another class of capital stock, and amounts realized upon forfeiture of capital stock subscriptions when such amounts are not required to be returned to the defaulting stockholder. It will be noted that none of these sources of capital surplus is related in any way to the normal operations of a business. Instead, they are distinctly the outcome of transactions in capital stock. For this reason, they should be distinguished from operating transactions, which are concerned not with the adjustment of the Capital Stock account but with the purchase and sale of merchandise or with the performance of services. Although capital surplus is the outcome of transactions in capital stock, it usually arises at a date subsequent to that of the original disposition of the capital stock. Notwithstanding that capital surplus is thus related to capital stock, it need not be inferred that it is characterized by all the qualities of capital stock and that therefore it should not be returned to the stockholders in the form of dividends. In fact, there is no legal prohibition to the payment of dividends out of capital surplus. Nevertheless, the situation in a given instance may warrant following the policy of regarding capital surplus as permanent capital.

Paid-In Surplus. Paid-in surplus arises in connection with the issuance of capital stock, as, for example, where capital stock having a par value is sold at a premium or where capital stock without par value is sold above stated value. This paid-in surplus, as its name indicates, is surplus which is paid in to the corporation by the stockholders. The payment is made for the capital stock, but the amount by which the payment exceeds the par value or stated value of the capital stock constitutes paid-in surplus. Such paid-in surplus should be regarded as a part of the permanent capital of the corporation, since it is equivalent in every respect to the credit which is carried to the Capital Stock account.

In practice there frequently occur examples of incorrect procedure in accounting for paid-in surplus. It is incorrect, for example, to assume that the purpose of paid-in surplus is to furnish the corporation with an account against which may be written off losses which occur during the first year of operation. In effect this would be a method of concealing initial deficits, and represents unsatisfactory accounting procedure. It is equally erroneous to pay dividends out of paid-in surplus, since this results in the return to the stockholders of a part of their investment. Notwithstanding the fact that dividends should not be paid from paid-in surplus, there is no legal prohibition against such practice unless it is specifically prohibited by statute. The general rule that paid-in surplus should remain permanently in the business should not be deviated from.

Donated Surplus. As the name indicates, the source of donated surplus is gifts, usually of the corporation's own stock, although the gift may take the form of other property. Like paid-in surplus, donated surplus should be treated as a capital investment and should therefore be retained permanently in the business and on the books. Not infrequently, the assets donated are given on the condition that the corporation receiving them do certain specified things. Thus, a city might give to a corporation a site of land, ultimate passing of title to be conditioned upon, say, the construction of a factory and the employment of a minimum number of men for a minimum period of time. If a corporation makes an entry on its books for property, thus contingently donated, it is clear that the donated

surplus arising therefrom remains contingent until all conditions have been met and transfer of title has been accomplished.

Perhaps the most frequent source of donated surplus is the contribution of capital stock by the stockholders. The most common motive for such donations of capital stock is to enable the donee corporation to raise additional working capital through the resale of the stock. Entry may be made on the corporation's books at the time the capital stock is donated, as follows:

Treasury Stock	*10,000.00*	
Donated Surplus		*10,000.00*

Since the ultimate amount of the surplus arising from such a donation of capital stock is contingent upon the sale of the stock, it may be necessary to adjust the amount of the donated surplus when the stock is sold. Thus, if the treasury stock referred to above is sold for $9,000.00, the entry is:

Cash	*9,000.00*	
Donated Surplus	*1,000.00*	
Treasury Stock		*10,000.00*

This leaves a balance of $9,000.00 in the Donated Surplus account.

Unearned Surplus. Unearned surplus, which is usually regarded as a division of capital surplus, is the result of the revaluation of assets, usually fixed assets. For this reason it is sometimes termed *revaluation surplus* and sometimes referred to as *reserve for unrealized increment in assets.* Regardless of the particular name employed, it results from the writing up of some asset. Usually such a write-up is made as the result of a long period of rising prices, so that the concern in question decides to restate the value of its property in line with the generally higher price levels. It is evident that any indication of increased value which might be entered upon the books cannot possibly result in a realized gain. Such increases in value are merely potential, and may or may not be an indication of what could be realized if an attempt were made to sell the assets in cash. Whatever accounting procedure is followed, it should clearly reflect the fact that no profit is realized; and for this reason either the expression *unearned surplus* or the expression *revaluation surplus*

may be employed. Either term indicates clearly that the *surplus* referred to is the result, not of an actual transaction, but of a kind of manipulation. To confuse such surplus with surplus arising out of earnings would be a gross error. Such potential unearned surplus cannot be used to pay dividends, even in the absence of laws prohibiting such use of unearned surplus.

No doubt there is sometimes a tendency to establish an Unearned Surplus account for improper purposes. Thus, such a surplus account might be created in order to offset and thus write off a deficit, a procedure which cannot be justified. Neither can such procedure be justified where it is done to make possible the payment of stock dividends. The creation of unearned surplus may be justified in case of a reorganization, or where it is employed to aid in the determination of tax valucs, or values which are to be used as a basis for the granting of credit.

Treatment of Appraisal Surplus. When unearned surplus arises as the result of an appraisal it is frequently termed appraisal surplus. An appraisal should be made by properly qualified persons, and is usually made to reflect present reproduction cost of the assets. When the appraisal is completed it may be desirable to record the results thereof either on the accounting records or in memoranda records. Assuming that the appraisal results in a writing-up of the plant value, it is necessary to determine what depreciation policy is to be followed with reference to the newly established plant values. It will be necessary either to continue basing depreciation charges on original cost, or to base the depreciation charges on the increased valuation resulting from the appraisal. To illustrate the alternative procedures, assume that The Atlas Corporation has fixed assets which, 10 years ago, cost \$500,000.00, the estimated total life of the assets being 20 years. There exists a depreciation reserve of \$250,000.00 which is the result of annual allowances of \$25,000.00 over the 10-year period. The Atlas Corporation, as of January 1 of the current year, has an appraisal made which indicates the following facts relative to its fixed assets:

Reproduction Cost New	*700,000.00*
Accrued Depreciation on Cost New	*350,000.00*
Present Sound Value	*350,000.00*

The journal entry required to reflect the results of the appraisal on the books of the Atlas Corporation is as follows:

Plant	*200,000 00*	
Reappraisal Surplus		*100,000 00*
Reserve for Depreciation		*100,000.00*

The question now arises as to whether depreciation should continue to be computed on original cost, namely $500,000.00, or whether it should be computed on the reproduction cost new, which is $700,000.00. The remaining life of the asset being 10 years, on the original cost basis the depreciation allowance each year will continue to be $25,000.00, and the entry to record this at the close of each year is as follows:

Depreciation Expense	*25,000.00*	
Reserve for Depreciation		*25,000.00*

Since $100,000.00 of actual depreciation has been carried to the credit of the Reappraisal Surplus account, it is necessary at the end of each year to transfer one-tenth of this amount, namely $10,000.00, from the Reappraisal Surplus account to the Reserve for Depreciation account by means of the following entry:

Reappraisal Surplus	*10,000.00*	
Reserve for Depreciation		*10,000.00*

Under this plan the depreciation charge remains the same after the appraisal as it was before. It is evident that the Appraisal Surplus account must gradually be transferred to the Reserve for Depreciation account, because no reappraisal surplus can exist in connection with a given asset when that asset is worn out and hence worthless.

The other procedure frequently considered in this connection is to the effect that the depreciation charge should be based, not on original cost, but on the appreciated value of the asset. The book value of the asset after being appreciated is $700,000.00 less existing accrued depreciation of $350,000.00 or $350,000.00. On a remaining life of 10 years the depreciation allowance becomes $35,000.00 yearly. The entry to express this allowance is as follows:

Depreciation Expense	*35,000.00*	
Reserve for Depreciation		*35,000.00*

Over the 10-year period $100,000.00 more is allowed for depreciation than would have been allowed on an original cost basis. For

this reason it is necessary each year to make an adjusting entry transferring $10,000.00 from the Reappraisal Surplus account to the Earned Surplus account. This entry is as follows:

Reappraisal Surplus	*10,000.00*	
Earned Surplus		*10,000.00*

This plan will provide a depreciation reserve of $700,000.00, and will result in an increase in earned surplus of $100,000.00, which is the net amount the Plant account was written up.

More attention has been given to the problems involved when assets are written up than when they are written down. Nevertheless, there may arise occasion for writing down assets. This may be the result of changes in price levels generally, or it may be the result of changes which concern only the enterprise in question. The fact that some concerns which have somewhat hurriedly written up assets, later find it necessary to write them down, serves as a warning against hasty action in these matters. Where depreciation charges are based on book values, the writing-up of book values results in increased depreciation charges which may adversely affect the profit showing during unprosperous periods. On the contrary, if the assets are revalued downward, depreciation charges will be reduced. This results in a better profit showing and enables the corporation to pay dividends which it might not otherwise be able to do. Whatever the changes may be which lead to the consideration of the desirability of writing down assets, the balance sheet status of the concern in question becomes a matter for serious consideration. If an asset having a book value of $1,000,000.00 is to be devalued in order to show a book value of $600,000.00, it is necessary to charge the $400,000.00 write-down against some account. If there is earned surplus in excess of this amount, it might be charged entirely to the Earned Surplus account, but this would result in definitely reducing the corporation's dividend-paying prospects. If there is capital surplus of a sufficient amount on the books, it would appear that a write-down should be made against the Capital Surplus account. Suppose, for example, that there is earned surplus of $300,000.00 and capital surplus of $200,000.00. Suppose also, that, if possible, it is desirable not to reduce the earned surplus. In order to accomplish the write-down it is necessary to increase capital surplus from

$200,000.00 to $400,000.00. About the only plan available to accomplish this is to reduce the par value of the capital stock. Then, after the total reduction amounts to $200,000.00, the following entry is in order:

Capital Stock	*200,000.00*	
Capital Surplus		*200,000.00*

The devaluation can now be accomplished through the following entry:

Capital Surplus	*400,000.00*	
Plant		*400,000.00*

It is evident that this procedure results in the reduction of the net worth of the corporation insofar as the records are concerned. Consequently, the apparent margin of safety of the creditors of the corporation is made narrower. Of course the actual status of the creditors is not changed, since the actual value of the assets is not affected by any entries which may be made on the accounting records. It simply means that the creditors' position is made clearer than it otherwise would be.

Reserves of Surplus. Surplus reserves are regarded by some accountants as the only true reserves, although many accountants recognize other types of reserves such as, for example, the well-known valuation reserve. The surplus reserve is created by means of an entry debiting the Surplus account and crediting the proper reserve account. Thus, if it is desired to set up a Reserve for Contingencies account of $50,000.00, the entry required is as follows:

Surplus	*50,000.00*	
Reserve for Contingencies		*50,000.00*

The effect is essentially the same when the debit is made to the Profit and Loss account, but this procedure is less common. In general, it may be said that reserves of surplus are created to meet future contingencies or to provide for future expansion and development. Thus, a reserve for plant extension would be created out of surplus; likewise, a sinking fund reserve would be created out of surplus.

Reserves of surplus are either voluntarily or involuntarily created. When the reserve is created in fulfillment of a contract it is

involuntary, since the corporation has no choice in the matter. When the reserve is voluntary the corporation ultimately has a choice in its disposition since it is not the result of contractual arrangements. In case of surplus reserves voluntarily created, there is nothing to prohibit the board of directors which voted to create the reserve from reversing its decision and voting to transfer the reserve back to the Surplus account. Of course, if the establishment of a reserve of surplus is in line with the financial policy of the corporation, a reversal of such a policy would ultimately require the transfer of the balance in the Reserve account back to the Surplus account.

The most that is accomplished by the establishment of a voluntary reserve of surplus is to draw attention to the fact that not all of the earned surplus is available for dividends. The fact that the surplus is reserved is an indication that the directors have determined not to use the amount thus reserved to pay dividends, at least not for the time being. As is indicated in the preceding discussion, the power to provide for voluntary reserves of surplus as well as the power to discontinue them is in the hands of the board of directors.

Perhaps the best illustration of an involuntary surplus reserve is one created in connection with the procedure for the retirement of outstanding bonds. Provisions relative to the establishment of such a reserve should appear in the indenture for the bond issue in question. In the same manner that involuntary reserves are set up to provide for the ultimate disposition of outstanding bonds, surplus reserves may also be created to provide for the retirement of capital stock. Such reserves may or may not be contractual in character. Common forms of surplus reserves are the following: (1) reserve for contingencies, (2) reserves for plant extension, (3) sinking fund reserves, (4) reserves for payment of dividends, (5) reserves for working capital, (6) reserves for some specified contingencies, such as (*a*) fire loss, (*b*) flood loss. In the case of most surplus reserves the reserve is ultimately disposed of by being transferred back to the Surplus account. This is true, for example, of reserves for redemption of bonds, and it is also true of reserves for contingencies if the contingency does not arise and after there is no longer any prospect that

it will occur. It is not true, however, of reserves for payment of dividends, except in the unusual event that the board of directors decides not to pay the dividend for which the reserve has been established.

Reserves vs. Funds. Reserves must be distinguished from funds. A fund is an asset and therefore must appear on the asset side of the balance sheet. Reserves of surplus, on the other hand, are a part of net worth and must therefore appear in the net worth section of the balance sheet. As a rule, funds are composed of cash and securities of a type which can be converted into cash when it is necessary to use the fund for which it was intended. If a fund is contractual in character as, for example, a fund established to pay off bonded indebtedness, such fund can be diverted to other purposes. If, on the contrary, a fund is noncontractual in character, such, for example, as a fund established for the purpose of making extensions to plant, demand may arise on the part of the stockholders that the fund be used to pay dividends. To some extent the directors may forestall such a demand by setting up a corresponding reserve for plant extension; this makes it clear that the surplus thus reserved is being withheld for the time being from surplus available for paying dividends. In the last analysis, the employment of noncontractual funds rests with the board of directors, as does the creation and disposition of noncontractual reserves of surplus.

The treatment which a company pursues relative to surplus is one of the primary indications of the degree of conservatism of the management. Creditors, as well as stockholders, are interested in whatever policy the corporation may pursue in this respect. In any event, creditors should not place too much emphasis on the amount of surplus which a corporation possesses since they have no power to prevent the use of this surplus for the payment of dividends.

Secret Reserves. When a secret reserve exists, the net worth of a corporation is understated by the amount of the reserve. A secret reserve is, therefore, a kind of negative reserve of surplus. If the undervalued asset or, as rarely occurs, the overstated liability is corrected on the books, surplus is to that extent increased. As a rule, secret reserves result from some form of asset undervaluation. This might be caused by excessive depreciation charges, by removing

some asset from the books of account, or by charging to expense items which properly should be capitalized. As indicated above, however, a secret reserve may arise from the overstatement of a liability.

As a rule, secret reserves are the result of overconservatism on the part of managers. Sometimes they result from carelessness, such as failure to show an important asset on the books. If an asset and an equal corresponding debt are both omitted, there exists no secret reserve, but there is, nevertheless, a misstatement of the facts. Perhaps the underlying motive leading to the establishment of secret reserves is the belief on the part of the management that it is well to have asset values in excess of those indicated in the concern's statement. A procedure intended to equalize the profit figure from year to year sometimes leads to the establishment of a secret reserve. Thus, if the managers in prosperous years write off excessive sums for depreciation in order to keep the book figure for profits down, a secret reserve results. The usual motive in such a procedure is to avoid the necessity of informing the stockholders of increased profits and thus to forestall demands that dividends be increased.

It may be noted that most of the devices employed to set up secret reserves result in misstatements of expenses, or revenues, or both. There is little justification for secret reserves. The understatement of assets and the overstatement of expenses may be as damaging as the contrary procedure of understating expenses and overstating assets. The purpose of accounting is to reflect as nearly as possible the facts. If secret reserves are established, it is necessary to make false reports to the stockholders and other interested parties. In many respects understatement of asset values is as reprehensible as overstatement of such values.

Chapter 11

ACCOUNTING FOR BOND ISSUES

The Problem Stated. Corporations sometimes employ bonds for long-term financing. The requirements of corporations are often such that many investors must be appealed to, so that the note secured by a mortgage, commonly used by individual borrowers, is not available. An equivalent result is secured by issuing a number of notes or bonds, all secured by a single mortgage or *deed of trust.*

Not all bonds are secured on specific assets. Bonds resting on a corporation's general credit are called debentures.

Neither are all bonds secured on real estate. Bonds secured on other securities are called collateral trust bonds.

Bonds are given a par value (say $500.00 or $1,000.00), are made to run for a specified time (say 5, 10, or 20 years), are issued at par, or above or below par, and are made redeemable in accordance with specific provisions.

Various arrangements are made to meet bond issues at maturity.

In this chapter consideration will be given to the following: (1) accounting procedure to issue bonds: (*a*) at par, (*b*) at a premium, (*c*) at a discount; (2) amortization of premium and discount; (3) bond redemption.

Accounting for Bond Issues

Authority. Unlike capital stock, provision might not be made in the charter for an issue of bonds. The authority for such an issuance rests with the stockholders, or the board of directors, subject to any provisions of the law of the state of incorporation. Illustrative of state laws governing the issuance of bonds is the following extract from Section 115 of the general corporation law of Delaware:

Any corporation organized under this Chapter for the construction and operation of a railroad shall have power to borrow such sums of money, from time to time, not exceeding in the aggregate double the amount of its fully paid capital

stock, as shall be necessary to build, construct or repair its road . . . and to secure the repayment thereof by the execution, negotiation and sale of any bond or bonds, and secure the same by mortgage on said lands, privileges, franchises and appurtenances of and belong to said corporation; . . .

Accounting Procedure. The following cases are illustrated: Case 1. Bonds issued at par; Case 2. Bonds issued at a discount; Case 3. Bonds issued at a premium.

Case 1. The Stewart-Wells Corporation decides to issue $500,000.00 of first mortgage, 6 per cent, 20-year bonds. These it sells at par, without the intervention of an underwriter, so that there are no expenses of issuance other than engraving and certain incidental costs which are charged to current expenses of operation. The entry is:

Jan. 1, 19—		
Cash	*500,000.00*	
First Mortgage 6 per cent Bonds		*500,000.00*
Sale of issue of first mortgage bonds at par.		

In some instances it may be desirable to make the bonds payable in installments, in which event subscribers are charged as follows:

Jan. 1, 19—		
Subscribers to Bonds	*500,000.00*	
First Mortgage 6 per cent Bonds Unissued		*500,000.00*
For sale of first mortgage bonds at par, payable in 4 equal installments on Feb. 1, March 1, April 1, and May 1.		

When the first installment is paid the entry is:

Feb. 1, 19—		
Cash	*125,000.00*	
Subscribers to Bonds		*125,000.00*
First installment per subscription contract.		

Similarly for each subsequent installment.

When the subscribers pay their installments they are given receipts. When the last installment is paid, their receipts are surrendered, the bonds are delivered, and the following entry is made:

May 1, 19—		
First Mortgage 6 per cent Bonds Unissued	*500,000.00*	
First Mortgage 6 per cent Bonds		*500,000.00*
For issuance of bonds, subscriptions having been paid in full at par.		

Case 2. The Orris Corporation arranges to issue $200,000.00 of 5 per cent, 20-year, first mortgage bonds, which it sells, without the

intervention of an underwriter, at 90, costs of engraving and other incidental expenses being charged to current expense. The entry at time of sale is:

March 1, 19—		
Cash	*180,000.00*	
Discount on Bonds	*20,000.00*	
First Mortgage 5 per cent Bonds		*200,000.00*
For sale of 200,000.00 first mortgage bonds at 90.		

Case 3. The Landis Corporation arranges to issue $200,000.00 of 7 per cent, 20-year, first mortgage bonds, which it sells, without the intervention of an underwriter, at 110, costs of engraving and other incidental expenses being charged to current expense. The entry at time of sale is:

April 1, 19—		
Cash	*220,000.00*	
First Mortgage 7 per cent Bonds		*200,000.00*
Premium on Bonds		*20,000.00*
For sale of 200,000.00 first mortgage bonds at 110.		

Amortization of Premium and Discount

Treatment of Bond Discount and Premium. Bond discount and premium are deviations in the selling price of bonds from par value thereof due, primarily, to the rate of interest, although other factors, such as market conditions, may be influential. Also, costs of underwriting are sometimes charged to the discount or premium account.

Several plans of handling discount or premium on bonds are available. These may be considered from the standpoint of (*a*) their practicability and (*b*) their accuracy.

Equal Installment Plan. Under the equal installment plan of handling discount and premium, the discount or premium is amortized in as many equal installments as there are interest periods.

In Case 3 above the term is 20 years and the premium is $20,000.00. Assuming that the interest at the nominal rate of 7 per cent is payable semiannually, the $20,000.00 will be amortized in 40 equal installments of ($20,000.00 ÷ 40) $500.00 each.

Interest on $200,000.00 at 7 per cent is $7,000.00 each 6 months' period. The entry for interest payment is as follows:

Oct. 1, 19—		
Interest Expense	*6,500.00*	
Premium on Bonds	*500.00*	
Cash		*7,000.00*
For payment of interest at nominal rate of 7 per cent; also to amortize 1/40 of the premium on bonds, as an interest adjustment.		

In case of bond discount, the procedure is essentially the same, except that the discount is amortized by being credited, thus making the true interest charge greater than indicated by the nominal rate. Note that in the illustration the true interest charge is less than that indicated by the nominal rate.

Although the interest charge thus secured is referred to as the *true* interest cost, this is not strictly accurate. Nevertheless, for practical purposes, the plan may be sufficiently accurate.

Scientific Amortization Plan. The scientific amortization plan is more complicated than the equal installment plan, but produces results mathematically accurate. It is based on the principle that the borrower pays interest on the unamortized portion of the premium, as well as on the face amount of the bonds; or, in case of bonds issued at a discount, on the face amount of the bonds less the unamortized portion of the discount, always at the same rate, which is termed the effective interest rate.

Under this plan the discount or premium is amortized, not by equal installments but by amounts sufficient to render the interest rate uniform throughout the life of the bond issue.

Bonds are usually sold to yield a given per cent, say, a 6 per cent bond may be sold at a price to yield 5 per cent, or at a price to yield 7 per cent. This determines the amount of the discount or premium. Bond tables are used to ascertain the price necessary to charge when a given yield is desired.

Use of Bond Tables Illustrated. Below is reproduced a specimen page taken from a book of bond tables. The years the bonds run are indicated at the top, the yield in the first column, and the price to afford this yield is shown in the other columns for the terms shown at the heads of columns. Thus a 5-year \$1,000.00 bond bearing a nominal rate of 5 per cent must be sold for \$1,022.17 to yield 4½ per cent on the investment, and this is the interest cost to the company which issues it.

VALUES, TO THE NEAREST CENT, OF A BOND FOR $1,000,000.00 AT 5 PER CENT INTEREST, PAYABLE SEMIANNUALLY

Net Income	3 Years	3½ Years	4 Years	4½ Years	5 Years
2 50	1 071 825 12	1 083 284 07	1 094 601 55	1 105 779 31	1 116 819 07
2 55	1 070 328 46	1 081 538 84	1 092 608 09	1 103 537 98	1 114 330 27
2 60	1 068 834 33	1 079 796 97	1 090 618 92	1 101 302 00	1 111 847 97
2 65	1 067 342 73	1 078 058 45	1 088 634 05	1 099 071 36	1 109 372 18
2 70	1 065 853 65	1 076 323 28	1 086 653 46	1 096 846 04	1 106 902 85
2 75	1 064 367 09	1 074 591 45	1 084 677 14	1 094 626 03	1 104 439 98
2 80	1 062 883 04	1 072 862 96	1 082 705 08	1 092 411 33	1 101 983 56
2 85	1 061 401 50	1 071 137 78	1 080 737 28	1 090 201 90	1 099 533 55
2 90	1 059 922 46	1 069 415 93	1 078 733 71	1 087 997 74	1 097 089 94
2 95	1 058 445 92	1 067 697 38	1 076 814 37	1 085 798 84	1 094 652 71
3 00	1 056 971 87	1 065 982 14	1 074 859 25	1 083 605 17	1 092 221 85
3 05	1 055 500 31	1 064 270 19	1 072 908 34	1 081 416 74	1 089 797 33
3 10	1 054 031 24	1 062 561 54	1 070 961 63	1 079 233 51	1 087 379 13
3 15	1 052 564 64	1 060 856 16	1 069 019 11	1 077 055 49	1 084 967 25
3 20	1 051 100 52	1 059 154 06	1 067 080 77	1 074 882 64	1 082 561 66
3 25	1 049 638 87	1 057 455 22	1 065 146 59	1 072 714 97	1 080 162 34
3 30	1 048 179 68	1 055 759 65	1 063 216 58	1 070 552 46	1 077 769 27
3 35	1 046 722 96	1 054 067 33	1 061 290 71	1 068 395 09	1 075 382 44
3 40	1 045 268 68	1 052 378 25	1 059 368 98	1 066 242 85	1 073 001 82
3 45	1 043 816 86	1 050 692 42	1 057 451 38	1 064 095 73	1 070 627 41
3 50	1 042 367 48	1 049 009 81	1 055 537 90	1 061 953 71	1 068 259 17
3 55	1 040 920 54	1 047 330 43	1 053 628 52	1 059 816 78	1 065 897 10
3 60	1 039 476 04	1 045 654 27	1 051 723 25	1 057 684 92	1 063 541 18
3 65	1 038 033 97	1 043 981 31	1 049 822 06	1 055 558 13	1 061 191 38
3 70	1 036 594 33	1 042 311 57	1 047 924 95	1 053 436 38	1 058 847 70
3 75	1 035 157 11	1 040 645 01	1 046 031 91	1 051 319 67	1 056 510 11
3 80	1 033 722 30	1 038 981 65	1 044 142 93	1 049 207 98	1 054 178 59
3 85	1 032 289 91	1 037 321 47	1 042 258 00	1 047 101 30	1 051 853 13
3 90	1 030 859 92	1 035 664 46	1 040 377 11	1 044 999 62	1 049 533 71
3 95	1 029 432 34	1 034 010 63	1 038 500 25	1 042 902 92	1 047 220 32
4 00	1 028 007 15	1 032 359 96	1 036 627 41	1 040 811 18	1 044 912 93
4 05	1 026 584 36	1 030 712 44	1 034 758 58	1 038 724 41	1 042 611 52
4 10	1 025 163 96	1 029 068 07	1 032 893 74	1 036 642 57	1 040 316 09
4 15	1 023 745 94	1 027 426 84	1 031 032 90	1 034 565 67	1 038 026 61
4 20	1 022 330 31	1 025 788 74	1 029 176 04	1 032 493 68	1 035 743 07
4 25	1 020 917 04	1 024 153 77	1 027 323 16	1 030 426 59	1 033 465 45
4 30	1 019 506 15	1 022 521 93	1 025 474 23	1 028 364 40	1 031 193 73
4 35	1 018 097 62	1 020 893 20	1 023 629 26	1 026 307 08	1 028 927 90
4 40	1 016 691 46	1 019 267 57	1 021 788 23	1 024 254 63	1 026 667 93
4 45	1 015 287 65	1 017 645 05	1 019 951 13	1 022 207 03	1 024 413 82
4 50	1 013 886 19	1 016 025 62	1 018 117 96	1 020 164 27	1 022 165 54
4 55	1 012 487 08	1 014 409 27	1 016 288 70	1 018 126 33	1 019 923 08
4 60	1 011 090 32	1 012 796 01	1 014 463 35	1 016 093 21	1 017 686 42
4 65	1 009 695 89	1 011 185 82	1 012 641 90	1 014 064 89	1 015 455 55
4 70	1 008 303 80	1 009 578 70	1 010 824 33	1 012 041 35	1 013 230 44
4 75	1 006 914 03	1 007 974 64	1 009 010 63	1 010 022 60	1 011 011 08
4 80	1 005 526 59	1 006 373 63	1 007 200 81	1 008 008 60	1 008 797 46
4 85	1 004 141 48	1 004 775 67	1 005 394 84	1 005 999 36	1 006 589 56
4 90	1 002 758 67	1 003 180 75	1 003 592 72	1 003 994 85	1 004 387 36
4 95	1 001 378 18	1 001 588 86	1 001 794 45	1 001 995 07	1 002 190 85
5 00	1 000 000 00	1 000 000 00	1 000 000 00	1 000 000 00	1 000 000 00

The method of amortizing discount or premium is shown in the following illustration.

A 5-year 5 per cent bond is sold to yield 4½ per cent. The bond table shows the price to be $1,022.17.

AMORTIZATION SCHEDULE

Jan. 1, 19–2	*Selling price*		*1,022.17*
July 1, 19–2	*Interest paid in cash*	*25.00*	
	True interest expense—2¼ per cent of 1,022.17	*23.00*	
	Premium amortized		*2.00*
	Carrying value		*1,020.17*
Jan. 1, 19–3	*Interest paid in cash*	*25.00*	
	True interest expense—2¼ per cent of 1,020.17	*22.95*	
	Premium amortized		*2.05*
	Carrying value		*1,018.12*
July 1, 19–3	*Interest paid in cash*	*25.00*	
	True interest expense—2¼ per cent of 1,018.12	*22.91*	
	Premium amortized		*2.09*
	Carrying value		*1,016.03*
Jan. 1, 19–4	*Interest paid in cash*	*25.00*	
	True interest expense—2¼ per cent of 1,016.03	*22.86*	
	Premium amortized		*2.14*
	Carrying value		*1,013.89*
July 1, 19–4	*Interest paid in cash*	*25.00*	
	True interest expense—2¼ per cent of 1,013.89	*22.81*	
	Premium amortized		*2.19*
	Carrying value		*1,011.70*
Jan. 1, 19–5	*Interest paid in cash*	*25.00*	
	True interest expense—2¼ per cent of 1,011.70	*22.76*	
	Premium amortized		*2.24*
	Carrying value		*1,009.46*
July 1, 19–5	*Interest paid in cash*	*25.00*	
	True interest expense—2¼ per cent of 1,009.46	*22.71*	
	Premium amortized		*2.29*
	Carrying value		*1,007.17*
Jan. 1, 19–6	*Interest paid in cash*	*25.00*	
	True interest expense—2¼ per cent of 1,007.17	*22.66*	
	Premium amortized		*2.34*
	Carrying value		*1,004.83*
July 1, 19–6	*Interest paid in cash*	*25.00*	
	True interest expense—2¼ per cent of 1,004.83	*22.61*	
	Premium amortized		*2.39*
	Carrying value		*1,002.44*
Jan. 1, 19–7	*Interest paid in cash*	*25.00*	
	True interest expense—2¼ per cent of 1,002.44	*22.56*	
	Premium amortized		*2.44*
	Carrying value—date of maturity		*1,000.00*

Scientific Amortization without Bond Tables. If bond tables are not available it becomes necessary to compute the price at which a bond must be sold to cost (or yield) a given interest rate.

Thus, at what price should a 5-year $1,000.00 bond, bearing a nominal interest rate of 5 per cent, be sold to result in a true interest cost of 4½ per cent to the company issuing it?

The interest being payable semiannually, the effective rate each 6 months' period is one-half of 4½ per cent, or 2¼ per cent. Reference to an interest table gives the present value of $1.00 due in 10 periods at 2¼ per cent as $0.80051013.

The present value of $1,000.00 due in 10 periods at 2¼ per cent interest per period is $1,000.00×$0.80051013 =$800.51.

The present value of 10 coupons of $25.00 each is:
Present worth of annuity of 1, per interest table, is 8.86621635.[1]

25×8.86631635 = 221.66

Selling price to result in true interest cost of 4½ per cent= $1022.17

The amortization then occurs, as explained above, in the illustrative amortization schedule.

Amortization Journalized. The results shown in the amortization schedule may be journalized. Thus, on July 1, 19–2, the entry is as follows:

Interest Expense	*23.00*	
Premium on Bonds	*2.00*	
Cash		*25.00*

and on July 1, 19–6, it is:

Interest Expense	*22.61*	
Premium on Bonds	*2.39*	
Cash		*25.00*

Note the decreasing interest expense (which is always 2¼ per cent of the carrying value of the bond), also the increasing amount charged each period to the Premium on Bonds account.

Bond Redemption

Bonds are redeemed in accordance with either of two plans: (1) sinking fund plan, (2) serial plan.

[1] For a discussion of the principles of compound interest and annuities the student is referred to Chapter 20.

Sinking Fund Plan. Under the sinking fund plan of bond redemption a sum of money is set aside periodically, usually in accordance with provisions of the trust deed, to be employed in the redemption of outstanding bonds. Sinking funds are of two types: (1) those in which only the principal is to be used for redemption purposes; (2) those in which both the principal and interest accumulated on such principal are to be so used. The second type is the true sinking fund, the characteristics of which are: (1) in form of cash or securities; (2) accumulates at compound interest; (3) used to pay, at maturity, a present debt or one certain to be incurred.

Control of Sinking Fund. The trust deed usually provides that installments to a sinking fund shall be made to an independent trustee (usually a trust company) who administers the trust fund and renders such reports of his transactions to the company as are necessary to enable it to make the necessary entries on its books.

Sinking Fund Plan Illustrated. Assume that, in case of a certain bond issue, the trust deed provides that, semiannually, there shall be paid by the issuing company to the trustee the sum of $20,000.00 in cash, this amount to be invested in certain types of securities, of a character which will permit their ready liquidation when money is required to meet the matured bond issue. The entry for each such installment is:

Sinking Fund Trustee	*20,000.00*	
Cash		*20,000.00*
For deposit with trustee per deed of trust provisions.		

When the trustee reports interest earned on the fund, the entry required is to charge the trustee and credit sinking fund income. Thus, if the trustee reports interest collections of $3,000.00, the entry is:

Sinking Fund Trustee	*3,000.00*	
Sinking Fund Income		*3,000.00*
For interest on sinking fund in hands of trustee.		

As a rule, sinking fund income should be carried to profit and loss. An alternative plan is to credit it to the sinking fund reserve. Under this plan, the earnings of the sinking fund are not recorded in either the Profit and Loss account or in the Surplus account.

Some Practical Considerations. In theory, equal sums are set aside periodically and are permitted to accumulate at compound interest at a specified rate, so that at the date of maturity of the bond issue the exact sum of money required for its redemption will be available. There are several reasons why such an outcome is, in practice, impossible:

1. The interest yields on available investments vary.
2. Interest earned cannot always be invested immediately upon its receipt.
3. Certain costs may have to be met out of the fund.
4. It may be desirable to employ the fund to retire part of the bond issue before maturity, owing to the market situation.

This last contingency is normally provided for in the trust deed, which may contain detailed specifications thereon.

Thus, one trust deed provides that the bonds may be redeemed, at any interest date, at 105 and interest, providing six weeks' notice be given. These considerations do not render accurate sinking fund computations unnecessary, but indicate that, in practice, deviations from the resulting forecast may be expected.

Sinking Fund Computations. Assume that, for the purpose of debt payment, it is desired to accumulate a fund of $60,000.00 in 6 years. Money put into the fund accumulates at 4 per cent per annum, compound interest.

Reference to a table of annuities shows that the amount of an ordinary annuity[2] of $1.00 for 6 periods at 4 per cent is $6.632975. Hence, the annual contribution to the fund is: $60,000.00 ÷ 6.632975 = $9,045.71.

The accumulation of the fund is as follows:

End of first year		*9,045.71*
End of second year:		
Interest on 9,045.71 at 4 per cent	*361.83*	
Installment	*9,045.71*	*9,407.54*
		18,453.25
End of third year:		
Interest on 18,453.25 at 4 per cent	*738.13*	
Installment	*9,045.71*	*9,783.84*
		28,237.09

[2] See footnote, page 164.

End of fourth year:		
Interest on 28,237.09 at 4 per cent	1,129.48	
Installment	9,045.71	10,175.19
		38,412.28
End of fifth year:		
Interest on 38,412.28 at 4 per cent	1,536.49	
Installment	9,045.71	10,582.20
		48,994.48
End of sixth year:		
Interest on 48,994.48 at 4 per cent	1,959.80	
Installment	9,045.71	11,005.51
		59,999.99

Callable Bonds. When it is provided that bonds are callable at certain interest dates at the option of the issuing company, usually at a specified premium, such option may render impossible the exact computation of the amount that will be required to pay off the debt. Usually, bonds are made callable at a specified premium, although redemption at a discount is possible.

To illustrate, assume that a corporation issues $100,000.00 in first mortgage bonds, due in 10 years, but made callable after 4 years, at any interest date, at 103 and accrued interest. At the end of 5 years it is decided to call one-half the issue, and a check for $51,500.00 is handed to the trustee. The entry is:

Sinking Fund Trustee	51,500.00	
Cash		51,500.00
For check sent sinking fund trustee to retire 50,000.00 of bonds at 103.		

When the trustee reports that the bonds have been retired, the entry is:

Bonds Payable	50,000.00	
Premium on Bonds Called	1,500.00	
Sinking Fund Trustee		51,500.00
For 50,000.00 in bonds retired at 103.		

Serial Bonds. Bonds are sometimes issued redeemable in series. In such case the bonds may be redeemed at maturity or, market conditions being favorable, they may be purchased before date of maturity. Of the various plans of treating discount and premium, two will be illustrated, viz., (1) bonds outstanding method, (2) effective rate method.

Bonds Outstanding Method Illustrated. Under the bonds outstanding plan of amortizing discount or premium, the amount amortized in a given period is found by multiplying the total dis-

count or premium by a fraction whose denominator is the amount of bonds outstanding at the end of that period, and whose numerator consists of the total of the amounts of bonds outstanding at the end of each period. Assume that a corporation, on July 1, 19—, issues $50,000.00 of bonds, bearing 6 per cent interest, payable semiannually, maturing $5,000.00 on each interest date. The issue is sold for $48,000.00. The bonds are redeemed as they mature, at par.

AMORTIZATION TABLE

Interest Date	Outstanding Bonds	Fraction of Bonds Redeemed	Amount of Discount Amortized
Jan. 1, 19—	50,000.00	5/27.5	363.63
July 1, 19—	45,000.00	4.5/27.5	327.27
Jan. 1, 19—	40,000.00	4/27.5	290.90
July 1, 19—	35,000.00	3.5/27.5	254.54
Jan. 1, 19—	30,000.00	3/27.5	218.18
July 1, 19—	25,000.00	2.5/27.5	181.82
Jan. 1, 19—	20,000.00	2/27.5	145.46
July 1, 19—	15,000.00	1.5/27.5	109.10
Jan. 1, 19—	10,000.00	1/27.5	72.74
July 1, 19—	5,000.00	.5/27.5	36.36
Totals	275,000.00	27.5/27.5	2,000.00

Fig. 47

The entry for sale of the bonds is:

July 1, 19—		
Cash	48,000.00	
Bond Discount	2,000.00	
Bonds Payable		50,000.00
Sale of bonds at 96.		

The entry at the end of the first 6 months' period is:

Interest on Bonds	1,863.63	
Cash		1,500.00
Bond Discount		363.63
Bonds Payable	5,000.00	
Cash		5,000.00

The entry at the end of the first year is:

Interest on Bonds	1,677.27	
Cash		1,350.00
Bond Discount		327.27
Bonds Payable	5,000.00	
Cash		5,000.00

And so on, until on July 1, 19—, when the last installment of \$5,000.00 is paid and the balance of the discount, \$36.36, is written off.

Effective Rate Method Illustrated. Assume that an issue of \$50,000.00 5-year serial bonds, bearing interest at the nominal rate of 5 per cent is to be sold to yield 4 per cent. \$5,000.00 of the principal is to be redeemed each interest date (Fig. 48).

In this case the principal of the issue consists of an annuity of \$5,000.00, payable in ten installments, at six-month intervals, and yielding 2 per cent interest per period. The present worth of an annuity of \$1.00 at 2 per cent for 10 periods, as shown in an annuity table, is \$8.98258501.[3] The present worth of an annuity of \$5,000.00 for this period and rate is $\$5{,}000.00 \times 8.98258501 = \$44{,}912.93$.

The coupons of the issue constitute a series of ten annuities of \$125.00 each, the first for one period, the second for two periods, and so on. The present worth of this series of annuities may be found by computing the present worth of each, as above, then finding the sum of these present worths, which is, for \$1.00, \$50.87074970. For a series of annuities of \$125.00 the sum is $\$50.87074970 \times 125 =$ \$6358.84.

Present value of principal (\$44,912.93) + present value of coupons (\$6,358.84) = \$51,271.77, selling price.

AMORTIZATION TABLE

Interest Dates	Carrying Value	Effective Interest	Coupon Payment	Premium Amortized
1st	*51,271.77*	*1,025.43*	*1,250.00*	*224.57*
2d	*46,047.20*	*920.94*	*1,125.00*	*204.06*
3d	*40,843.14*	*816.86*	*1,000.00*	*183.14*
4th	*35,660.00*	*713.20*	*875.00*	*161.80*
5th	*30,498.20*	*609.96*	*750.00*	*140.04*
6th	*25,358.16*	*507.16*	*625.00*	*117.84*
7th	*20,240.32*	*404.81*	*500.00*	*95.19*
8th	*15,145.13*	*302.90*	*375.00*	*72.10*
9th	*10,073.03*	*201.46*	*250.00*	*48.54*
10th	*5,024.49*	*100.49*	*125.00*	*24.51*
				1,271.79

Fig. 48

[3] See footnote, page 164.

The journal entry at the first interest date is:

Bonds Payable	5,000.00	
Premium on Bonds	224.57	
Interest on Bonds	1,025.43	
Cash		6,250.00
First coupon on 50,000.00 5 per cent bonds, sold to yield 4 per cent; also first redemption of 5,000 of principal.		

Similar entries are made at each interest date. At the end of the tenth period the entry made completes the amortization of the discount, and also pays off the remaining $5,000.00 of the principal, thus:

Bonds Payable	5,000.00	
Premium on Bonds	24.49	
Interest on Bonds	100.49	
Cash		5,124.98
Last coupon on 5,000.00 outstanding bonds; also payment of this principal.		

Chapter 12

CONSOLIDATED STATEMENTS

Intercompany Holdings of Capital Stock. In practically all of the states the laws permit corporations to acquire the capital stock of other corporations. These acquisitions may be for the purpose of either investment or control. Where the motive is investment, the holdings need not comprise a majority of the voting stock of the company whose stock is held. If, however, control is the motive, it is practically necessary that the holding company own a majority interest in the company which it undertakes to control. The control of another company is frequently sought to secure unification of management over concerns which are distinct from a legal point of view. Among the advantages of unified control over concerns which are legally distinct are:

1. Limitation of liability. If a controlled company fails, the loss suffered by the holding company is limited to its investment in the controlled, or subsidiary, company.
2. A degree of integration in industry, not otherwise obtainable, is secured. A company which manufactures automobiles controls a company which operates an iron mine. Distinct types of organization are required in order successfully to prosecute these activities. Through the plan of stock ownership it is possible to secure the required types of organization while maintaining unified control.
3. Subsidiary companies may be organized on a geographical basis to meet special requirements of climate, local custom, and local peculiarities.
4. As distinct from integration, a higher degree of specialization is attainable through unified control of diverse activities. Thus, a bank may organize a subsidiary company to engage in underwriting, or a publisher of magazines may organize a subsidiary to publish books.

Among the disadvantages of intercorporate control are the following:

1. Monopoly may result through the disappearance of independent competitors.
2. Financial statements may be "rigged" by failing to present all facts essential to an understanding of the financial status of holding company and subsidiaries.

3. Holding companies may become mere agencies of control, tending to become topheavy through a multiplicity of levels of control, and contributing relatively small sums to the investment involved in the controlled enterprises.

Statements To Be Consolidated. Ordinarily, the statements to be consolidated are the balance sheets and statements of profit and loss of the affiliated group of corporations. This is because unified control of two or more concerns, through intercorporate holdings of stock, leads to a demand for statements which will show the status and earnings of the group when considered as a unit.

Intercompany stock holdings must be eliminated and majority and minority interests set forth in the consolidated balance sheet.

Intercompany profits must be eliminated in the consolidated statement of profit and loss.

By the majority interest is meant that represented by the stock of the subsidiary companies held by the controlling company.

By the minority interest is meant that represented by the stock of the subsidiary company not held by the controlling company.

Consideration of Principles

The consolidation of the statements of affiliated companies must be carried out in accordance with certain recognized principles, by applying these principles to concrete conditions. The principles are fixed, but the conditions under which they must be applied are constantly changing, each case presenting peculiarities not found elsewhere. These principles will be considered in accordance with the following outline:

1. Acquisition of control
   a) Purchase price of subsidiary's stock
      (1) At book value
      (2) Below book value
      (3) Above book value
2. Surplus of subsidiary
   a) At date of acquisition by holding company
   b) Acquired after acquisition of control by holding company
3. Treatment of dividends paid by subsidiary
4. The minority interest
5. Profit on intercompany transactions
   a) Effect on balance sheets
   b) Effect on profit and loss statements
6. Intercompany debts

Acquisition of Control. The control of one company by another may result from either: (*a*) the purchase of a controlling interest by one company in another which has existed previously as an independent concern, or (*b*) the incorporation of a subsidiary company by another company which thus automatically becomes the principal owner of the subsidiary's capital stock.

Where one company purchases a controlling interest in the capital stock of an existing corporation, the acquisition of the necessary capital stock is a matter of bargaining with the existing stockholders of the company whose control is sought. This may be accomplished on the established stock markets, or, in case of stocks not listed, by resort to direct dealings with the stockholders. The chief problem involved is one of valuation, and since different stockholders place different estimates on the value of their holdings, the purchase price per share is likely to vary. Considerations involved are: (1) Book value of the stock. (2) Market conditions, particularly the market price of the stock in question, where such market price is established through numerous transactions in the stock. (3) Degree of conservatism reflected in the financial statements of the company whose stock is sought. In accordance therewith the book value may be found to be representative, or otherwise, of true present worth of the stock.

Case 1. Company X, as at January 1, 19—, has the status reflected in the following balance sheet:

Company X

BALANCE SHEET

as at January 1, 19—

Assets.	$100,000 00	Capital Stock .	$100,000.00
	$100,000.00		$100,000.00

If there are 1,000 shares of stock, the book value per share is $100.00.

Company A, desiring to secure control of Company X, attempts to purchase its outstanding stock. It may pay book value, or more or less than book value, for it, depending on conditions mentioned above.

If Company A pays book value, the entry on its books is:

Jan. 1, 19—		
Investment in Stock of Company X.	*100,000.00*	
Cash.		*100,000.00*
For purchase of outstanding stock of Company X, consisting of 1,000 shares at 100.00 per share.		

If more or less than book value is paid, the entry is the same, except as to the amount, but the investment will be carried on Company A's books at an amount which differs from the net book value of the assets shown on Company X's balance sheet.

Case 2. Company X, as at January 1, 19—, has the status reflected in the following balance sheet:

Company X

Balance Sheet

as at Jan. 1, 19—

Assets.	\$150,000.00	Capital Stock.	\$100,000.00
		Surplus	50,000 00
	\$150,000.00		\$150,000 00

If there are 1,000 shares of stock, the book value per share is \$150.00.

Company A, desiring to secure control of Company X, attempts to purchase its outstanding stock. If it pays book value therefor, the entry is:

Jan. 1, 19—		
Investment in Stock of Company X.	*150,000.00*	
Cash		*150,000.00*
For purchase of outstanding stock of Company X, consisting of 1,000 shares at 150.00 per share.		

Here, also, the purchase price might be either above or below book value, in which case the actual amount paid would be reflected in the entry.

Control may be secured by purchase of merely a majority interest in the stock of the subsidiary. Thus, at book value, a 75 per cent interest in Company X could be purchased for .75 times \$150,000.00 which equals \$112,500.00.

Surplus of Subsidiary Company. If a subsidiary company is created *de novo* (anew), it will have no surplus. If, however, it has previously existed as an independent enterprise, it will probably

have an accumulated surplus or deficit. In this event the price paid will be based on the net worth, which consists of capital stock plus surplus (or less deficit). Such surplus or deficit, although resulting from operations, is in no sense a part of the surplus of the company which secures control by acquiring the subsidiary company's stock after such surplus (or deficit) has been acquired.

The status of a subsidiary's surplus (or deficit) acquired after control is secured by the holding company is different. If the control results from a 100 per cent ownership of subsidiary's stock, the entire amount of surplus (or deficit) thus acquired (i.e., after affiliation) should be treated as surplus (or deficit) of the affiliated companies.

If such control is the result of less than a 100 per cent ownership of the subsidiary's stock, the percentage of the subsidiary's surplus to be treated as surplus of the affiliated companies is whatever the percentage of stock of subsidiary owned by the holding company is to the entire outstanding stock of the subsidiary.

Thus, if the subsidiary has surplus of $100,000.00, all acquired since acquisition of control through ownership by holding company of 75 per cent of subsidiary's stock, then $75,000.00 thereof represents earned surplus of the affiliated companies. The balance, $25,000.00, belongs to the minority interest in the controlled company.

Treatment of Dividends Paid by Subsidiary. Since a subsidiary company retains its legal entity, even when its entire outstanding stock is owned by the controlling company, it observes all legal requirements as if it acted independently. Consequently it pays dividends on its capital stock the same as if such stock were held by the public.

It is possible, however, that, where one company is controlled by another, its dividend policy may not be the same as it would be were its stock held by the public. Thus, a subsidiary, instead of paying a dividend, might make a loan to the controlling company.

Dividends are paid from profits. When a subsidiary company closes its books and ascertains its net profit, the controlling company has the option of: (1) bringing its proportionate interest in such profits on its books by charging the Investment in Stock of Sub-

sidiary account, or, (2) Making no entry therefor until the subsidiary declares a dividend.

Case 1. Company A owns all of the capital stock of Company B, which it carries on its books at $117,000.00. The price originally paid for this stock was $90,000.00, the increase of $27,000.00 resulting from Company A's policy of entering the profits of the subsidiary on its books as soon as ascertained. For the current year Company B's net profit is $6,500.00. As soon as Company A receives this information it makes the following entry:

Investment in Stock of Company B	*6,500.00*	
Profit on Investment in Company B		*6,500.00*
To bring on books the net profit of Company B, 100 per cent of Company B's stock being owned.		

In case Company A does not take up Company B's profits and owns 75 per cent of Company B's stock, the entry in the event Company B pays a 5 per cent dividend is:

Dividends Receivable	*3,750.00*	
Income from Dividends		*3,750.00*
For dividend of 5 per cent declared by Company B, 75 per cent of whose stock is owned.		

Case 2. Company X owns all of the capital stock of Company Y, which it carries on its books at its original cost, $90,000.00. Since date of purchase of Company Y's stock by Company X, Company Y has earned net profit amounting to $27,000.00, and for the current year its net profit amounts to an additional $6,500.00. Company X does not take up the net profits of Company Y on its books at the time reported, but does, of course, make entry for dividends declared by Company Y.

To date, since date of acquisition of its stock by Company X, Company Y has declared dividends totaling $20,000.00. These have been taken up on Company X's books as follows:

Dividends Receivable	*20,000.00*	
Income from Dividends		*20,000.00*
For dividends declared by Company Y, 100 per cent of whose stock is owned.		

This leaves $13,500.00 of the profits of Company Y unaccounted for on the books of Company X. In other words, the investment of Company X in Company Y is worth $13,500.00 more than the

amount expressed in the Investment in Stock of Company B account on Company X's books, which stands charged with $90,000.00.

The Minority Interest. When the controlling company's interest in the subsidiary company is less than 100 per cent there exists a minority interest which, although lacking control, may nevertheless be able to elect one or more representatives on the board of directors.

The minority interest consists of the capital stock of the subsidiary plus a proportionate part of the subsidiary's surplus.

Thus, if the subsidiary's capital stock is $100,000.00 and its surplus is $50,000.00, and 75 per cent of its stock is held by another corporation, the minority interest is:

25 per cent of capital stock of 100,000.00	*=25,000.00*
25 per cent of surplus of 50,000.00	*=12,500.00*
	37,500.00

In the consolidated balance sheet the minority interest must be expressed separately from the majority interest because such minority interest possesses important rights and privileges which the majority interest cannot disregard.

Profit on Intercompany Transactions. The profits earned by the two or more corporations of an affiliated group may result from: (1) transactions with the outside public, (2) intercompany transactions, i.e., transactions between members of the affiliated group.

Profits from these sources require separate treatment when financial statements are consolidated.

Profits resulting from transactions with the outside public are profits of the affiliated group of companies and should be shown as part of consolidated surplus.

Profits resulting from intercompany transactions must be separated into: (1) those applicable to the minority interest, (2) those applicable to the majority interest.

When intercompany stock ownership is complete (100 per cent) there is no minority interest and hence, no profit applicable thereto.

Case 1. Company A owns 100 per cent of the capital stock of Company B. On intercompany sales there results a profit of $10,000.00 for the year, which is additional to $50,000.00 profit made on sales to the public.

The entire $10,000.00 of intercompany profit is reflected in increased inventory valuations of the affiliated companies and should be eliminated from both the consolidated balance sheet and the consolidated statement of profit and loss. The net profit of the affiliated companies is $50,000.00 for the year.

Case 2. Company X owns 80 per cent of the capital stock of Company Y. On intercompany sales (Company Y to Company X) there results a profit of $10,000.00 for the year, which is additional to $50,000.00 profit made on sales to the public.

Of the intercompany profit of $10,000.00, 20 per cent, or $2,000.00, is applicable to the minority interest and must be recognized, in the consolidated balance sheet, as a legitimate addition to surplus applicable to the minority interest. The remaining $8,000.00 should be eliminated from the consolidated balance sheet accounts for (*a*) inventory and (*b*) consolidated surplus.

Intercompany Debts. The status of affiliated corporations is one which encourages the creation of intercorporate debts. The controlling company lends money to the subsidiary company, or vice versa. Sometimes a holding company is in a position to use its holding in stocks of its subsidiaries as collateral in securing a large loan at favorable interest rates, in turn, lending such sums to these subsidiaries as may be needed by them to promote operations.

In the consolidated balance sheet all intercompany indebtedness must be eliminated, because when the affiliated companies are considered as a unit the charge on one set of books cancels the credit on the other set.

Suppose Company A controls Company B through stock ownership. Company A lends $10,000.00 to Company B. This is a charge on Company A's books and a credit on Company B's books, appearing likewise on the balance sheets of these companies. When the balance sheets are consolidated these two accounts cancel out, and thus are eliminated.

Consolidated Balance Sheet Procedure

The principles involved in the intercompany ownership of capital stock have been considered. Where such intercompany ownership of stock results in affiliation and consequent unified

control, it is desirable to express the resulting economic status of the affiliated companies by setting up a consolidated balance sheet derived from the balance sheets of the affiliated companies.

Consolidated Balance Sheet—No Minority Interest

Outline of Cases.

Group 1. Stock of subsidiary bought at book value and balance sheets consolidated at date of affiliation.

Case 1. No subsidiary surplus or deficit at date of affiliation.

Case 2. Subsidiary surplus at date of affiliation.

Case 3. Subsidiary deficit at date of affiliation.

Group 2. Stock of subsidiary bought at book value and balance sheets consolidated at a later date.

Case 1. No subsidiary surplus or deficit at date of affiliation, but a surplus acquired by subsidiary after affiliation. (*a*) This surplus taken up on books of holding company. (*b*) This surplus not taken up on books of holding company.

Case 2. Subsidiary surplus at date of affiliation, also a surplus acquired by subsidiary after affiliation. (*a*) Surplus acquired after acquisition taken up on books of holding company. (*b*) Surplus acquired by subsidiary after affiliation not taken up on books of holding company.

Case 3. Subsidiary deficit at date of affiliation, and a surplus acquired by subsidiary after affiliation. (*a*) Surplus acquired by subsidiary after affiliation taken up on books of holding company. (*b*) Surplus acquired by subsidiary after affiliation not taken up on books of holding company.

Group 3. Stock of subsidiary bought at *other* than book value and balance sheets consolidated at a later date.

Case 1. No subsidiary surplus or deficit at date of affiliation, stock bought *below* book value, and a surplus acquired by subsidiary after affiliation. (*a*) This surplus taken up on books of holding company. (*b*) This surplus not taken up on books of holding company.

Case 2. Subsidiary surplus at date of affiliation, stock of subsidiary bought *above* book value, and a surplus acquired by subsidiary after affiliation. (*a*) Surplus acquired by subsidiary after affiliation taken up on books of holding company. (*b*) Surplus acquired by subsidiary after affiliation, not taken up on books of holding company.

Case 3. Subsidiary surplus at date of affiliation, stocks of subsidiary bought *below* book value, and a deficit acquired by subsidiary after affiliation. (*a*) Deficit acquired after affiliation taken up on books of holding company. (*b*) This deficit acquired after affiliation not taken up on books of holding company.

GROUP I. STOCK OF SUBSIDIARY BOUGHT AT BOOK VALUE AND BALANCE SHEETS CONSOLIDATED AT DATE OF AFFILIATION

Case 1. No subsidiary surplus or deficit at date of affiliation.

Company A, as at December 31, 19—, purchases all of the capital stock of Company B at its book value. After the purchase their balance sheets are as follows:

Company A

BALANCE SHEET

as at December 31, 19—

Stock of Company B....	$100,000.00	Capital Stock..........	$200,000.00
Other Assets......... ..	100,000.00		
	$200,000.00		$200,000.00

Company B

BALANCE SHEET

as at December 31, 19

Assets................	$100,000.00	Capital Stock....	$100,000.00
	$100,000.00		$100,000.00

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B........	*100,000.00*		*(1) 100,000.00*	
Other Assets....	*100,000.00*	*100,000.00*		*200,000.00*
	200,000.00	*100,000.00*	*100,000.00*	*200,000.00*
Liabilities and Net Worth				
Capital Stock.	*200,000.00*	*100,000.00*	*(1) 100,000.00*	*200,000.00*
	200,000.00	*100,000.00*	*100,000.00*	*200,000.00*

Fig. 49

Key to eliminations:

(1) Capital Stock.................................	*100,000.00*	
Stock of Company B		*100,000.00*

To eliminate capital stock of Company B, all of which is owned by Company A.

The consolidated balance sheet of companies A and B follows:

Companies A and B

CONSOLIDATED BALANCE SHEET

as at December 31, 19—

Assets	$200,000.00	Capital Stock (Company A)	$200,000.00
	$200,000.00		$200,000.00

The assets of the two companies are combined. The capital stock of the holding company (Company A) remains outstanding.

Case 2. Subsidiary surplus at date of affiliation.

In this and following cases the preliminary statement of the separate balance sheets is omitted. The consolidated balance sheet may or may not be shown, accordingly as it appears necessary to do so to illustrate form or arrangement of items thereon.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	*120,000.00*		*(1) 120,000.00*	
Other Assets	*170,000.00*	*120,000.00*		*290,000.00*
	290,000.00	*120,000.00*	*120,000.00*	*290,000.00*
Liabilities and Net Worth				
Capital Stock	*200,000.00*	*100,000.00*	*(1) 100,000.00*	*200,000.00*
Surplus	*90,000.00*	*20,000.00*	*(1) 20,000.00*	*90,000.00*
	290,000.00	*120,000.00*	*120,000.00*	*290,000.00*

Fig. 50

Key to eliminations:

(1) Capital Stock	*100,000.00*	
Surplus	*20,000.00*	
Stock of Company B		*120,000.00*

To eliminate capital stock and surplus of Company B, the stock being all owned by Company A, and the surplus having been acquired before date of affiliation.

Case 3. Subsidiary deficit at date of affiliation.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	90,000.00		(1) 90,000.00	
Other Assets	170,000.00	90,000.00		260,000.00
Deficit		10,000.00	(1) 10,000.00	
	260,000 00	100,000.00	100,000.00	260,000.00
Liabilities and Net Worth				
Capital Stock	200,000.00	100,000.00	(1) 100,000.00	200,000.00
Surplus	60,000.00			60,000.00
	260,000.00	100,000 00	100,000.00	260,000.00

Fig. 51

Key to eliminations:

(1) Capital Stock	100,000.00	
Stock of Company B		90,000.00
Deficit		10,000.00

To eliminate capital stock and deficit of Company B, the stock being all owned by Company A, and the deficit having been acquired before affiliation.

GROUP 2. CAPITAL STOCK OF SUBSIDIARY BOUGHT AT ITS BOOK VALUE AND BALANCE SHEETS CONSOLIDATED AT A LATER DATE

Case 1 (a). No subsidiary surplus or deficit at date of affiliation, a surplus acquired by subsidiary *after* affiliation, this surplus taken up on books of holding company.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	110,000.00		(1) 110,000.00	
Other Assets	170,000.00	110,000.00		280,000.00
	280,000.00	110,000.00	110,000.00	280,000 00
Liabilities and Net Worth				
Capital Stock	200,000 00	100,000.00	(1) 100,000.00	200,000.00
Surplus	80,000.00	10,000.00	(1) 10,000.00	80,000.00
	280,000.00	110,000.00	110,000.00	280,000.00

Fig. 52

On December 31, 19—, Company A acquires all of the capital stock of Company B at its book value, $100,000.00, which is also its par value. During the next year Company B acquires a surplus of $10,000.00, which is taken up by Company A by an entry charging Stock of Company B account and crediting profit and loss, and thus, indirectly, surplus.

Key to eliminations:

(1) Capital Stock	*100,000.00*	
Surplus	*10,000.00*	
Stock of Company B		*110,000.00*
To eliminate capital stock and surplus of Company B, the stock being all owned by Company A, and the surplus of Company B having been brought on Company A's books.		

Case 1 (b). No subsidiary surplus or deficit at date of affiliation, a surplus acquired by subsidiary *after* affiliation, this surplus *not* taken up on books of holding company.

On December 31, 19—, Company A acquires all of the capital stock of Company B at its book value, $100,000.00, which is also its par value. During the next year Company B acquires a surplus of $10,000.00, which is *not* taken up on Company A's books. Company B pays no dividend during the year.

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To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	*100,000.00*		*(1) 100,000.00*	
Other Assets	*170,000.00*	*110,000.00*		*280,000.00*
	270,000.00	*110,000.00*	*100,000.00*	*280,000.00*
Liabilities and Net Worth				
Capital Stock	*200,000.00*	*100,000.00*	*(1) 100,000.00*	*200,000.00*
Surplus	*70,000.00*	*10,000.00*		*80,000.00*
	270,000.00	*110,000.00*	*100,000.00*	*280,000.00*

Fig. 53

Key to eliminations:

(1) Capital Stock	*100,000.00*	
Stock of Company B		*100,000.00*
To eliminate capital stock of Company B, Company B's surplus, acquired since affiliation, not having been taken up on Company A's books.		

Case 2 (a). Subsidiary surplus at date of affiliation, also a surplus acquired by subsidiary *after* affiliation, the surplus thus acquired taken up on books of holding company.

On December 31, 19—, Company A acquires all of the capital stock of Company B at its book value, viz., $120,000.00. Company B's capital stock on that date is $100,000.00, and its surplus amounts to $20,000.00. During the next year Company B adds $10,000.00 to its surplus which is taken up on the books of Company A, the holding company.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B........	*130,000.00*		*(1) 130,000.00*	
Other Assets............	*170,000.00*	*130,000.00*		*300,000.00*
	300,000.00	*130,000.00*	*130,000.00*	*300,000.00*
Liabilities and Net Worth				
Capital Stock.......... ..	*200,000.00*	*100,000.00*	*(1) 100,000.00*	*200,000.00*
Surplus................	*100,000.00*	*30,000.00*	*(1) 30,000.00*	*100,000.00*
	300,000.00	*130,000.00*	*130,000.00*	*300,000.00*

Fig. 54

Key to eliminations:

(1) Capital Stock....................................	*100.000.00*	
Surplus..	*30,000.00*	
Stock of Company B..........................		*130,000.00*
To eliminate capital stock of Company B, Company B's surplus acquired since affiliation having been taken up on Company A's books.		

Case 2 (b). Subsidiary surplus at date of affiliation, also a surplus acquired by subsidiary after affiliation, the surplus thus acquired *not* taken up on books of holding company.

On December 31, 19—, Company A acquires all of the capital stock of Company B at its book value, viz., $120,000.00. Company B's capital stock on that date is $100,000.00, and its surplus amounts to $20,000.00. During the next year Company B adds $10,000.00 to its surplus which is *not* taken up on the books of Company A, the holding company.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	*120,000.00*		*(1) 120,000.00*	
Other Assets	*170,000.00*	*130,000.00*		*300,000.00*
	290,000.00	*130,000.00*	*120,000.00*	*300,000.00*
Liabilities and Net Worth				
Capital Stock	*200,000.00*	*100,000.00*	*(1) 100,000.00*	*200,000.00*
Surplus	*90,000.00*	*30,000.00*	*(1) 20,000.00*	*100,000.00*
	290,000.00	*130,000.00*	*120,000.00*	*300,000.00*

Fig. 55

Key to eliminations:

(1) Capital Stock	*100,000.00*	
Surplus	*20,000.00*	
Stock of Company B		*120,000.00*

To eliminate capital stock of Company B, Company B's surplus since date of acquisition not having been taken up on Company A's books.

Case 3 (a). Subsidiary deficit at date of affiliation, a surplus acquired by subsidiary after affiliation, the surplus thus acquired taken up on books of holding company.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	*110,000.00*		*(1) 110,000.00*	
Other assets	*170,000.00*	*110,000.00*		*280,000.00*
	280,000.00	*110,000.00*	*110,000.00*	*280,000.00*
Liabilities and Net Worth				
Capitol Stock	*200,000.00*	*100,000.00*	*(1) 100,000.00*	*200,000.00*
Surplus	*80,000.00*	*10,000.00*	*(1) 10,000.00*	*80,000.00*
	280,000.00	*110,000.00*	*110,000.00*	*280,000.00*

Fig. 56

On December 31, 19—, Company A acquires all of the capital stock of Company B at its book value, viz., $90,000.00. Company

B's capital stock on that date is $100,000.00, and its deficit is $10,000.00. During the next year Company B earns a net profit of $20,000.00, thus converting its $10,000.00 deficit into a $10,000.00 surplus. This profit is taken up on Company A's books.

Key to eliminations:

(1) Capital Stock	*100,000.00*	
Surplus	*10,000.00*	
Stock of Company B		*110,000.00*
To eliminate capital stock of Company B, Company B's surplus acquired since affiliation having been taken up on Company A's books.		

Case 3 (b). Subsidiary deficit at date of affiliation, a surplus acquired by subsidiary after affiliation, the surplus thus acquired *not* taken up on books of holding company.

On December 31, 19—, Company A acquires all of the capital stock of Company B at its book value, viz., $90,000.00. Company B's capital stock on that date is $100,000.00, and its deficit is $10,000.00. During the next year Company B earns a net profit of $20,000.00, thus converting its $10,000.00 deficit into a $10,000.00 surplus. This profit is not taken up on Company A's books.

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To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	*90,000.00*		*(1) 90,000.00*	
Other Assets	*170,000.00*	*110,000.00*		*280,000.00*
	260,000.00	*110,000.00*	*90,000.00*	*280,000.00*
Liabilities and Net Worth				
Capital Stock	*200,000.00*	*100,000.00*	*(1) 100,000.00*	*200,000.00*
Surplus	*60,000.00*	*10,000.00*	*(1) 10,000.00**	*80,000.00*
	260,000.00	*110,000.00*	*90,000.00*	*280,000.00*

*Red.

Fig. 57

Key to eliminations:

(1) Capital Stock	*100,000.00*	
Stock of Company B		*90,000.00*
Surplus		*10,000.00*
To eliminate capital stock of Company B, Company B's surplus since affiliation not having been taken up on Company A's books.		

GROUP 3. STOCK OF SUBSIDIARY BOUGHT AT *OTHER* THAN BOOK VALUE AND BALANCE SHEETS CONSOLIDATED AT A LATER DATE

Case 1 (a). No subsidiary surplus or deficit at date of affiliation, stock bought *below* book value, a surplus acquired by subsidiary after affiliation, this surplus taken up on books of holding company.

Assume that on January 1, 19—, Company A buys all of the capital stock of Company B, amounting to $100,000.00 par, for $90,000.00. Company B has no surplus or deficit at the time its stock is acquired by Company A. During the ensuing year Company B acquires a surplus of $10,000.00, which is taken up on the books of the holding company.

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To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	100,000.00		(1) 100,000.00	
Other Assets	170,000.00	110,000.00		280,000.00
Goodwill	20,000.00		(1) 10,000.00	10,000.00
	290,000.00	110,000.00	110,000.00	290,000.00
Liabilities and Net Worth				
Capital Stock	200,000.00	100,000.00	(1) 100,000.00	200,000.00
Surplus	90,000.00	10,000.00	(1) 10,000.00	90,000.00
	290,000.00	110,000.00	110,000.00	290,000.00

Fig. 58

Key to eliminations:

(1) *Capital Stock*	100,000.00	
Surplus	10,000.00	
Stock of Company B		100,000.00
Goodwill		10,000.00
To eliminate capital stock of Company B, it having been bought for 10,000.00 less than its book value, Company B's surplus since affiliation having been taken up on Company A's books.		

The credit of $10,000.00 to Goodwill account requires explanation. Company A purchased Company B's stock for $10,000.00 less than its book value. Company A was not willing to pay book value either because: (1) it did not think Company B's future earning power would justify paying book value, or because (2) it regarded the book value of some asset on Company B's books as overstated.

If (1) is the reason, then the combined goodwill of the affiliated companies is $10,000.00 less than shown on their books, and the elimination should be as shown above.

If (2) is the reason, it would be correct procedure to reduce the value of other assets $10,000.00, instead of reducing goodwill.

There is a third possibility, viz., that Company A purchased the capital stock of Company B for $10,000.00 less than it was worth. In this event Capital Surplus account should be credited, thus:

Capital Stock	*100,000.00*	
Surplus	*10,000.00*	
Stock of Company B		*100,000.00*
Capital Surplus		*10,000.00*
To eliminate capital stock of Company B, it having been bought for 10,000.00 less than its conservative book value, and Company B's surplus since acquisition having been taken up on Company A's books.		

Where there is no Goodwill account on the books and no other assets appear to be overvalued, it is customary, in any event, to credit the difference between book value and purchase price to Capital Surplus account, if the stock of the subsidiary was purchased below its book value.

Case 1 (b). Same as Case 1 above, but surplus of subsidiary acquired since date of affiliation has *not* been taken up on books of holding company.

Working Papers

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	*90,000.00*		(1) *90,000.00*	
Other Assets	*170,000.00*	*110,000.00*		*280,000.00*
Goodwill	*20,000.00*		(1) *10,000.00*	*10,000.00*
	280,000.00	*110,000.00*	*100,000.00*	*290,000.00*
Liabilities and Net Worth				
Capital Stock	*200,000.00*	*100,000.00*	(1) *100,000.00*	*200,000.00*
Surplus	*80,000.00*	*10,000.00*		*90,000.00*
	280,000.00	*110,000.00*	*100,000.00*	*290,000.00*

Fig. 59

Key to eliminations:

(1) *Capital Stock*	*100,000.00*	
Stock of Company B		*90,000.00*
Goodwill		*10,000.00*
To eliminate capital stock of Company B, it having been bought for 10,000.00 less than book value, Campany B's surplus since affiliation not taken up on Company A's books.		

Case 2 (a). Subsidiary surplus at date of affiliation, stock of subsidiary bought above book value, a surplus acquired by subsidiary bought after affiliation, this surplus taken up on books of holding company.

On January 1, 19—, Company B has outstanding capital stock of $100,000.00 and surplus of $10,000.00. Company A buys all of Company B's stock on that date for $115,000.00. During 19— Company B adds $10,000.00 to its surplus, this being taken up on Company A's books.

Working Papers

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	*125,000.00*		*(1) 125,000.00*	
Other Assets	*170,000.00*	*120,000.00*		*290,000.00*
Goodwill	*20,000.00*		*(1) 5,000.00**	*25,000.00*
	315,000.00	*120,000.00*	*120,000.00*	*315,000.00*
Liabilities and Net Worth				
Capital Stock	*200,000.00*	*100,000.00*	*(1) 100,000.00*	*200,000.00*
Surplus	*115,000.00*	*20,000.00*	*(1) 20,000.00*	*115,000.00*
	315,000.00	*120,000.00*	*120,000.00*	*315,000.00*

*Red.

Fig. 60

Key to eliminations:

(1) *Capital Stock*	*100,000.00*	
Surplus	*20,000.00*	
Goodwill	*5,000.00*	
Stock of Campany B		*125,000.00*
To eliminate capital stock af Company B, it having been bought for 5,000.00 more than its book value, Company B's surplus since affiliation taken up an Company A's books.		

Case 2 (b). Same as Case 2 (*a*), except that surplus of subsidiary acquired after affiliation *not* taken up on books of holding company.

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To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	115,000.00		(1) 115,000.00	
Other Assets	170,000.00	120,000.00		290,000.00
Goodwill	20,000.00		(1) 5,000.00*	25,000.00
	305,000.00	120,000.00	110,000.00	315,000.00
Liabilities and Net Worth				
Capital Stock	200,000.00	100,000.00	(1) 100,000.00	200,000.00
Surplus	105,000.00	20,000.00	(1) 10,000.00	115,000.00
	305,000.00	120,000.00	110,000.00	315,000.00

*Red.

Fig. 61

Key to eliminations:

(1) *Capital Stock*	100,000.00	
Surplus	10,000.00	
Goodwill	5,000.00	
Stock of Company B		115,000.00

To eliminate capital stock of Company B, it having been bought for 5,000.00 more than its book value, and Company B's surplus since affiliation not taken up on Company A's books.

Case 3 (a). Subsidiary surplus at date of affiliation, stock of subsidiary bought below book value, a deficit acquired by subsidiary after affiliation, this deficit taken up on books of holding company.

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To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	85,000.00		(1) 85,000.00	
Other Assets	185,000.00	95,000.00		280,000.00
Goodwill	20,000.00		(1) 10,000.00	10,000.00
Deficit		5,000.00	(1) 5,000.00	
	290,000.00	100,000.00	100,000.00	290,000.00
Liabilities and Net Worth				
Capital Stock	200,000.00	100,000.00	(1) 100,000.00	200,000.00
Surplus	90,000.00			90,000.00
	290,000.00	100,000.00	100,000.00	290,000.00

Fig. 62

On January 1, 19—, Company B has outstanding capital stock of $100,000.00 and surplus of $10,000.00. Company A buys all of Company B's stock on that date for $100,000.00, or $10,000.00 below book value. During 19—, Company B incurs a loss of $15,000, this being taken up in Company A's books.

Key to eliminations:

(1) *Capital Stock*	*100,000.00*	
Stock of Company B		*85,000.00*
Goodwill		*10,000.00*
Deficit		*5,000.00*

To eliminate capital stock of Company B, it having been bought for 10,000.00 less than book value, and Company B's loss since affiliation having been taken up on Company A's books.

Case 3 (b). Same as Case 3 (*a*), except that deficit of subsidiary incurred after affiliation *not* taken up on books of holding company.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	*100,000.00*		*100,000.00*	
Other Assets	*185,000.00*	*95,000.00*		*280,000.00*
Goodwill	*20,000.00*		*10,000.00*	*10,000.00*
Deficit		*5,000.00*	*5,000.00*	
	305,000.00	*100,000.00*	*115,000.00*	*290,000.00*
Liabilities and Net Worth				
Capital Stock	*200,000.00*	*100,000.00*	*100,000.00*	*200,000.00*
Surplus	*105,000.00*		*15,000.00*	*90,000.00*
	305,000.00	*100,000.00*	*115,000.00*	*290,000.00*

Fig. 63

Key to eliminations:

(1) *Capital Stock*	*100,000.00*	
Surplus	*15,000.00*	
Stock of Company B		*100,000.00*
Goodwill		*10,000.00*
Deficit		*5,000.00*

To eliminate capital stock of Company B, it having been bought for 10,000.00 less than book value, and Company B's loss since affiliation not taken up on Company A's records.

Consolidated Balance Sheet—Minority Interest

A minority interest in the subsidiary company will be assumed.

Cases To Be Considered. Cases similar to those already considered, but with a minority interest in the subsidiary's capital stock, will be the subject matter of this division. Owing to limitations on space only the following cases, selected from those previously considered, will be illustrated: Group 1, cases 1 and 3; Group 2, cases 1 (*a*), 2 (*b*), and 3 (*a*); Group 3, cases 1 (*a*), 2 (*b*), and 3 (*a*).

GROUP 1. STOCK OF SUBSIDIARY BOUGHT AT ITS BOOK VALUE AND BALANCE SHEETS CONSOLIDATED AT DATE OF AFFILIATION

Case 1. No subsidiary surplus or deficit at date of affiliation.

Company A, as at December 31, 19—, purchases 80 per cent of the capital stock of Company B at its book value.

Working Papers

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B (80 per cent)	*80,000.00*		*(1) 80,000.00*	
Other Assets	*120,000.00*	*100,000.00*		*220,000.00*
	200,000.00	*100,000.00*	*80,000.00*	*220,000.00*
Liabilities and Net Worth				
Capital Stock	*200,000.00*	*100,000.00*	*(1) 80,000.00*	{ *20,000.00* *200,000.00*
	200,000.00	*100,000.00*	*80,000.00*	*220,000.00*

Fig. 64

Key to eliminations:

(1) Capital Stock	*80,000.00*	
Stock of Company B		*80,000.00*

To eliminate Company A's 80 per cent interest in capital stock of Company B.

The consolidated balance sheet of Companies A and B follows:

Companies A and B

CONSOLIDATED BALANCE SHEET

as at December 31, 19—

Assets	$220,000.00	Capital Stock—Company A	$200,000.00
		Capital Stock of Company B outstanding	20,000.00
	$220,000.00		$220,000.00

Case 3. Subsidiary deficit at date of affiliation.

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To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B (80 per cent)	*64,000.00*		*(1) 64,000.00*	
Other Assets	*136,000.00*	*80,000.00*		*216,000.00*
Deficit		*20,000.00*	*(1) 16,000.00*	*4,000.00*
	200,000.00	*100,000.00*	*80,000.00*	*220,000.00*
Liabilities and Net Worth				
Capital Stock	*200,000.00*	*100,000.00*	*(1) 80,000.00*	*20,000.00* *200,000.00*
	200,000.00	*100,000.00*	*80,000.00*	*220,000.00*

Fig. 65

Key to eliminations:

(1) Capital Stock	*80,000.00*	
Stock of Company B		*64,000.00*
Deficit		*16,000.00*
To eliminate Company A's 80 per cent interest in capital stock of Company B, the deficit of Company B being acquired before affiliation.		

GROUP 2. STOCK OF SUBSIDIARY BOUGHT AT BOOK VALUE AND BALANCE SHEETS CONSOLIDATED AT A LATER DATE

Case 1 (a). No subsidiary surplus or deficit at date of affiliation, but a surplus acquired by subsidiary *after* affiliation, this surplus being taken up on books of holding company.

On December 31, 19—, Company A acquires 80 per cent of the capital stock of Company B at book value, $80,000.00, which is also par value. During the next year Company B acquires a surplus of $10,000.00, 80 per cent of which is taken up by Company A by an entry charging Stock of Company B account and crediting profit and loss, thus, indirectly, surplus.

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To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B........	*88,000 00*		*(1) 88,000.00*	
Other Assets	*182,000.00*	*110,000.00*		*292,000.00*
	270,000.00	*110,000.00*	*88,000.00*	*292,000.00*
Liabilities and Net Worth				
Capital Stock.....	*200,000.00*	*100,000.00*	*(1) 80,000.00*	{ *20,000 00* *200,000.00*
Surplus............	*70,000.00*	*10,000.00*	*(1) 8,000.00*	{ *2,000.00* *70,000.00*
	270,000.00	*110,000.00*	*88,000.00*	*292,000.00*

Fig. 66

Key to eliminations:

(1) Capital Stock...................................	*80,000.00*	
Surplus....	*8,000.00*	
Stock of Company B		*88,000.00*
To eliminate 80 per cent capital stock and surplus of Company B, 80 per cent of whose stock is held by Company A and 80 per cent of whose surplus has been brought on Company A's books.		

Case 2 (b). Subsidiary surplus at date of affiliation, also subsidiary surplus acquired after affiliation, surplus thus acquired after affiliation *not* taken up on books of holding company.

On December 31, 19—, Company A acquires 80 per cent of the capital stock of Company B at book value, viz., $96,000.00. Company B's capital stock on that date is $100,000.00 and its surplus is $20,000.00. During the next year Company B adds $10,000.00 to its surplus which is *not* taken up on the books of Company A.

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To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B . . .	96,000 00		(1) 96,000.00	294,000.00
Other Assets. .	164,000.00	130,000 00		
	260,000.00	130,000 00	96,000 00	294,000.00
Liabilities and Net Worth				
Capital Stock .. .	200,000.00	100.000.00	(1) 80,000.00	{ 20,000.00 200,000.00
Surplus.	60,000.00	30,000.00	(1) 16,000.00	{ 6,000.00 68,000.00
	260,000.00	130,000.00	96,000 00	294,000.00

Fig. 67

Key to eliminations:

(1) *Capital Stock*	80,000.00	
Surplus	16,000.00	
Stock of Company B.		96,000.00

To eliminate 80 per cent of capital stock of Company B, also 80 per cent of surplus of Company B acquired before affiliation (20,000.00).

Note: The balance of the $20,000.00 of surplus of Company B, viz., $4,000.00, belongs to the minority. Of Company B's surplus acquired after affiliation, 80 per cent, or $8,000.00, belongs to the controlling interest, and $2,000.00 to the minority interest, making it $6,000.00.

Case 3 (a). Subsidiary deficit at date of affiliation, and a subsidiary surplus acquired after affiliation, surplus thus acquired being taken up on books of holding company.

On December 31, 19—, Company A acquires 80 per cent of the capital of Company B at book value, viz., $72,000.00. Company B's capital stock at that date is $100,000.00, and its deficit is $10,000.00. During the next year Company B earns a net profit of $20,000.00, thus converting its $10,000.00 deficit into a $10,000.00 surplus; 80 per cent of this profit is taken up on Company A's books, making its investment in Company B $88,000.00.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B........	*88,000.00*		*(1) 88,000.00*	
Other Assets.............	*182,000.00*	*110,000.00*		*292,000.00*
	270,000.00	*110,000.00*	*88,000.00*	*292,000.00*
Liabilities and Net Worth				
Capital Stock.............	*200,000.00*	*100,000.00*	*(1) 80,000.00*	*200,000.00* *20,000.00*
Surplus.................	*70,000.00*	*10,000.00*	*(1) 8,000.00*	*70,000.00* *2,000.00*
	270,000.00	*110,000.00*	*88,000.00*	*292,000.00*

Fig. 68

Key to eliminations:

(1) Capital Stock....................................	*80,000.00*	
Surplus.........	*8,000.00*	
Stock of Company B.		*88,000.00*
To eliminate 80 per cent of capital stock of Company B, also 80 per cent of surplus of Company B.		

Note that the minority interest in the surplus is $2,000.00.

GROUP 3. STOCK OF SUBSIDIARY BOUGHT AT OTHER THAN BOOK VALUE AND BALANCE SHEETS CONSOLIDATED AT A LATER DATE

Case 1 (a). No subsidiary surplus or deficit at date of affiliation, stock bought *below* book value, and a surplus acquired after affiliation, this surplus taken up on books of holding company.

Assume that on January 1, 19—, Company A buys 80 per cent of the capital stock of Company B, amounting to $80,000.00 par, for $75,000.00. At this date Company B has neither surplus nor deficit. During the next year Company B acquires a surplus of $10,000.00, 80 per cent of which is taken up on Company A's books, thus making the investment of Company A in Company B $83,000.00.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	83,000.00		(1) 83,000.00	
Other assets	140,000.00	110,000.00		250,000.00
Goodwill	20,000.00		(1) 5,000.00	15,000.00
	243,000.00	110,000.00	88,000.00	265,000.00
Liabilities and Net Worth				
Capital Stock	200,000.00	100,000.00	(1) 80,000.00	{ 20,000.00 200,000.00
Surplus	43,000.00	10,000.00	(1) 8,000.00	{ 2,000.00 43,000.00
	243,000.00	110,000.00	88,000.00	265,000.00

Fig. 69

Key to eliminations:

(1) *Capital Stock*	80,000.00	
Surplus	8,000.00	
Stock of Company B		83,000.00
Goodwill		5,000.00

To eliminate capital stock of Company B, held by Company A, it having been bought for 5,000 less than book value, and 80 per cent of Company B's surplus acquired since affiliated having been taken up on Company A's books.

Case 2 (b). Subsidiary surplus at date of acquisition, stock of subsidiary bought above par, and a subsidiary surplus acquired after affiliation, but *not* taken up on books of holding company.

On January 1, 19—, Company B has outstanding capital stock of \$100,000.00, and surplus of \$10,000.00. Company A buys 80 per cent of Company B's stock on that date for \$93,000.00, which is \$5,000.00 above book value. During 19—, Company B adds \$10,000.00 to its surplus, which is *not* taken up on Company A's books. See Fig. 70.

Key to eliminations:

(1) *Capital Stock*	80,000.00	
Surplus	8,000.00	
Goodwill	5,000.00	
Stock of Company B		93,000.00

To eliminate capital stock of Company B held by Company A, it having been bought for 5,000.00 more than book value, none of B's surplus acquired after affiliation having been taken up on Company A's books.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	93,000.00		93,000.00	
	130,000.00	120,000.00		250,000.00
	20,000.00		5,000.00*	25,000.00
	243,000.00	120,000.00	88,000.00	275,000.00
Liabilities and Net Worth				
Capital Stock	200,000.00	100,000.00	80,000.00	{ 200,000.00 20,000.00
Surplus	43,000.00	20,000.00	8,000.00	{ 51,000.00 4,000.00
	243,000.00	120,000.00	88,000.00	275,000.00

*Red.

Fig. 70

Case 3 (a). Subsidiary surplus at date of affiliation, stock of subsidiary bought below book value, and a deficit acquired by subsidiary after acquisition of its stock by holding company, this deficit being reflected on books of holding company.

On January 1, 19—, Company B has outstanding capital stock of $100,000.00, and surplus of $10,000.00. On that date Company A buys 80 per cent of Company B's stock for $83,000.00, which is $5,000.00 below book value. During 19—, Company B loses $15,000.00, and 80 per cent of this loss is reflected on Company A's books.

WORKING PAPERS

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Capital Stock of Company B..	71,000.00		71,000.00	
Other Assets.............	170,000.00	95,000.00		265,000.00
Goodwill..........	20,000.00		5,000.00	15,000.00
Deficit..................		5,000.00	4,000.00	1,000.00
	261,000.00	100,000.00	80,000.00	281,000.00
Liabilities and Net Worth				
Capital Stock............	200,000.00	100,000.00	80,000.00	{ 200,000.00 20,000.00
Surplus................	61,000.00			61,000.00
	261,000.00	100,000.00	80.000.00	281,000.00

Fig. 71

Key to eliminations:

(1) Capital Stock	*80,000.00*	
Capital Stock of Company B		*71,000.00*
Goodwill		*5,000.00*
Deficit		*4,000.00*

To eliminate capital stock of Company B held by Company A, it having been bought far 5,000.00 less than book value, a deficit of 5,000.00 having been incurred since affiliation.

Intercompany Debts and Profits

The principles involved where intercompany debts and profits exist have been considered. These will be illustrated in two cases: Case 1. Intercompany debts, intercompany profit, and no minority interest. Case 2. Intercompany debts, intercompany profit, and a minority interest.

Case 1. Company A owns all of the capital stock of Company B, which it purchased on December 31, 19—, for $120,000.00, which was $10,000.00 more than its book value. At that date Company B's outstanding stock was $100,000.00 and its surplus was $10,000.00.

The balance sheets of Companies A and B are to be consolidated as at December 31, 19—. During the 4 years since Company A acquired control of Company B, Company B has added $50,000.00 to its surplus and this has all been taken up on Company A's books,

Working Papers

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B	*170,000.00*		*(1) 170,000.00*	
Loan to Company A		*7,000.00*	*(2) 7,000.00*	
Merchandise	*287,000.00*	*90,000.00*	*(3) 3,000.00*	*374,000.00*
Goodwill	*30,000.00*		*(1) 10,000.00**	*40,000.00*
Other Assets		*63,000.00*		*63,000.00*
	487,000.00	*160,000.00*	*170,000.00*	*477,000.00*
Liabilities and Net Worth				
Capital Stock	*400,000.00*	*100,000.00*	*(1) 100,000.00*	*400,000.00*
Surplus	*80,000.00*	*60,000.00*	*(1) 60,000.00*	*77,000.00*
			(3) 3,000.00	
Loan from Company B	*7,000.00*		*(2) 7,000.00*	
	487,000.00	*160,000.00*	*170,000.00*	*477,000.00*

*Red.

Fig. 72

so that Company A's investment in Company B's stock now stands at $170,000.00. See Fig. 72.

Key to eliminations:

(1) Capital Stock	*100,000.00*	
Surplus	*60,000.00*	
Goodwill	*10,000.00*	
Capital Stock of Company B		*170,000.00*
To eliminate interest of Company A in Company B (100 per cent).		
(2) Loan from Company B	*7,000.00*	
Loan to Company A		*7,000.00*
To eliminate intercompany loan.		
(3) Surplus	*3,000.00*	
Merchandise		*3,000.00*
To eliminate intercompany profit in inventory of merchandise.		

Company B has paid no dividends since date of affiliation. It has, however, frequently made loans to Company A, and at December 31, 19—, Company B owes Company A $7,000.00.

During the 4-year period since date of affiliation Company A has frequently sold goods to Company B. Most of these goods have been sold in turn by Company B to the public, but on December 31, 19—, there is in Company B's inventory $10,000.00 of merchandise purchased from Company A. Company A's gross profit on the sale of this merchandise to Company B was $3,000.00.

Of Company B's surplus $10,000.00 was acquired before affiliation and $50,000.00 acquired since affiliation has been taken up on Company A's books, hence all is eliminated. $10,000.00 is added to goodwill because Company A paid that amount in excess of book value for Company B's stock.

Case 2. Company A owns 80 per cent of the capital stock of Company B, which it purchased on December 31, 19—, for $96,000.00, which was $8,000.00 more than its book value. At that date Company B's outstanding stock was $100,000.00 and its surplus was $10,000.00.

The balance sheets of companies A and B are to be consolidated as at December 31, 19—. During the four years since Company A acquired control of Company B, Company B has added $50,000.00 to its surplus. Company A has *not* taken up on its books any part of this surplus earned by Company B since affiliation.

Company B has paid no dividends since date of affiliation. It has, however, frequently made loans to Company A, and at December 31, 19—, there is in Company A's inventory $10,000.00 of merchandise bought from B at a profit of $3,000.00 to B.

WORKING PAPER

To Consolidate Balance Sheets as at December 31, 19—

	Company A	Company B	Eliminations	Consolidated Balance Sheet
Assets				
Stock of Company B (80 per cent)	96,000.00		(1) 96,000.00	
Loan to Company A		7,000.00	(2) 7,000.00	
Merchandise	241,000.00	90,000.00	(3) 2,400.00	328,600.00
Goodwill	30,000.00		(1) 8,000.00*	38,000.00
Other Assets		63,000.00		63,000.00
	367,000.00	160,000.00	97,400.00	429,600.00
Liabilities and Net Worth				
Capital Stock	300,000.00	100,000.00	(1) 80,000.00	{ 300,000.00 20,000.00
Surplus	60,000.00	60,000.00	(1) 8,000.00 (3) 2,400.00	97,600.00 12,000.00
Loan from Company B	7,000.00		(2) 7,000.00	
	367,000.00	160,000.00	97,400.00	429,600.00

*Red.

Fig. 73

Key to eliminations:

(1) Capital Stock	*80,000.00*	
Surplus	*8,000.00*	
Goodwill	*8,000.00*	
Capital Stock of Company B		*96,000.00*
To eliminate interest of Company A in Company B (80 per cent).		
(2) Same as in Case 1 above.		
(3) Surplus	*2,400.00*	
Merchandise		*2,400.00*
To eliminate majority interest (80 per cent) in intercompany profit in inventory.		

Of Company B's surplus at date of affiliation ($10,000.00) 80 per cent is eliminated; the balance ($2,000.00) belongs to the minority. Of Company B's surplus acquired since affiliation ($50,000.00) 20 per cent belongs to the minority. Company A's interest in Company B's surplus at date of affiliation is eliminated. This is $8,000.00. $8,000.00 is added to goodwill because Company A paid that amount in excess of book value for Company B's stock.

Chapter 13

COMPARATIVE STATEMENTS—ANALYSIS

Limitations of Accounting Period. The accounting period, whether it be one month or one year, has certain limitations It is limited as to its indication of trends. (*a*) over long periods of time, (*b*) within the current period.

The shortcomings mentioned under (*a*) may be remedied by means of comparative statements.

The shortcomings mentioned under (*b*) are not so easily corrected, except where the accounting period can be subdivided into shorter periods, as the year into months, the month into weeks, the week into days, and so on. Practical difficulties usually render unprofitable the employment of an accounting period of less than one month's duration.

A material defect in the month, as now used, is its variation in length, from 28 to 31 days, which makes it less desirable as a basis of comparison. The adoption of the natural business year of thirteen months of equal duration would remedy this defect. Until this is done it will be necessary to assume the various months equal in point of time.

Periods To Be Covered. In this chapter the month or the year will be regarded as the suitable unit of comparison. The question then arises, how many months or years must be employed as a basis of comparison? The answer varies, according to the requirements. The Securities and Exchange Act shows a preference for a 3-year period, when presenting a comparative statement of earnings, expenses, and fixed charges.

Some companies, in their annual reports, present profit and loss statements in comparative form from the beginning, or from the beginning of their present form of organization.

How Comparisons Are Expressed. Where values are involved, comparisons may be expressed in the following ways· (1) absolute sums, (2) percentages, (3) ratios.

If the gross sales of a concern amount to $100,000 00 one year and $150,000 00 the next year, the three ways of expressing this comparison mentioned above are illustrated in Fig. 74:

GROSS SALES OF X CONCERN

	Plan of Comparison	First Year	Next Year
1		*100,000 00*	*150,000 00*
2	.	*100 per cent*	*150 per cent*
3		*1*	*1 5*

Fig 74

Frequently two or all of these plans are combined, by presenting the profit and loss statement and balance sheet in usual form, singularly or in comparative arrangement; then expressing, in juxtaposition, such percentages and ratios as will assist in the work of interpretation.

What Statements Should Be Shown. The extent to which statements should be expressed in comparative form depends on circumstances. There exist certain physical limitations to the reproduction of data in comparative form. Those statements which most clearly indicate trends should therefore be selected. The following are typical:

1 Balance sheet
2 Profit and loss statement
3 Statement of cost of goods manufactured and sold
4. Schedules of expenses.
   a) Manufacturing
   b) Selling
   c) Administrative
   d) Financial

Plans of Expressing Comparisons. The variation between like items may be expressed in absolute amount and in a percentage of increase or decrease, or it may be expressed as a percentage only Suppose net sales to be $10,000.00 one year and $12,000.00 the next year. These figures may be compared in two ways, thus:

First Method

Sales 1st Year	Sales 2d Year	Percentage Increase or Decrease*
10,000 00	*12,000.00*	*20*

Second Method

Sales 1st Year	Sales 2d Year	Amount of Increase or Decrease*	Percentage Increase or Decrease*
10,000.00	*12,000.00*	*2,000.00*	*20*

The second plan may be varied, as follows:

Sales 1st Year	Sales 2d Year	Increase or Decrease* Amount	Per Cent
10,000.00	*12,000.00*	*2,000.00*	*20*

Sometimes it is desired to show the variation in percentages. Thus, the statement of profit and loss is frequently set up by expressing the absolute amounts in the usual way, then showing all important items therein as percentages based on net sales taken as 100 per cent. The variation is shown by expressing the increase or decrease in percentages, with or without expressing it in dollars and cents. Thus, if, in a given year, net sales amount to $15,000.00, and cost of sales to $11,000.00, resulting in a gross profit of $4,000.00, the facts may be shown as follows:

		Percentage
Net Sales	*15,000.00*	*100.00*
Less Cost of Goods Sold	*11,000.00*	*73.33*
Gross Profit	*4,000.00*	*26.67*

Assume that for the next year the facts are as shown below:

		Percentage
Net Sales	*17,000.00*	*100.00*
Less Cost of Goods Sold	*15,000.00*	*88.235*
Gross Profit	*2,000.00*	*11.765*

The results for the two years may now be compared by showing the increase or decrease in per cents, thus:

	1st Year	Percentage	2d Year	Percentage	Increase or Decrease* in per Cent
Net Sales	*15,000.00*	*100.00*	*17,000.00*	*100.00*	
Less Cost of Goods Sold	*11,000.00*	*73.3333*	*15,000.00*	*88.2352*	*14.9019*
Gross Profit	*4,000.00*	*26.6666*	*2,000.00*	*11.7647*	*14.9019**

Forms of Comparative Balance Sheet. Below are shown two forms of comparative balance sheets, the balance sheets compared being the same.

The Godfrey Company

COMPARATIVE BALANCE SHEET

Assets	*Dec. 31 19—*	*Dec. 31 19—*	*Decrease*	*Increase*
Cash	$ 3,000.00	$ 4,000.00		$1,000.00
Accounts Receivable	17,000.00	19,000.00		2,000.00
Merchandise Inventory	21,000.00	23,000.00		2,000.00
Prepaid Insurance	800.00	400.00	$ 400.00	
Investments	6,000.00	7,000.00		1,000.00
Land	12,000.00	12,000.00		
Building and Machinery	19,000.00	19,000.00		
Furniture and Fixtures	3,000.00	3,500.00		500.00
Delivery Equipment	3,300.00	4,000.00		700.00
Goodwill	10,000.00	10,000.00		
	$95,100.00	$101,900.00		
Net Increase in Assets			6,800.00	
			$7,200.00	$7,200.00
Liabilities and Net Worth				
Accounts Payable	$12,000.00	$ 11,000.00	$1,000.00	
Notes Payable	5,000.00	4,000.00	1,000.00	
Bank Loan	4,000.00	5,000.00		$1,000.00
Accrued Taxes	300.00	250.00	50.00	
Accrued Wages	800.00	700.00	100.00	
Mortgage on Land and Building	6,000.00	6,000.00		
Reserve for Depreciation on Building and Machinery	4,000.00	4,500.00		500.00
Reserve for Depreciation on Furniture and Fixtures	800.00	1,000.00		200.00
Reserve for Depreciation on Delivery Equipment	700.00	900.00		200.00
Capital Stock	50,000.00	50,000.00		
Surplus	11,500.00	18,550.00		7,050.00
	$95,100.00	$101,900.00		
Net Increase in Liabilities and Net Worth			6,800.00	
			$8,950.00	$8,950.00

Fig. 75

Comment on Foregoing Form. This form of comparative balance sheet is subject to the criticism that it shows no classification of assets and liabilities, hence renders difficult comparisons which a comparative balance sheet should make easy. Changes are shown only in dollars, no percentages being employed. Such a balance

sheet may be made the basis of a statement of funds derived and applied, which will be explained later. Instead of using two columns to show increases and decreases in dollars, one column may be used, decreases being indicated by an asterisk (*). This leaves the last column for showing percentages of increase and decrease. This variation in form is illustrated below (Fig. 76):

The Godfrey Company

COMPARATIVE BALANCE SHEET

Assets	*Dec. 31 19—*	*Dec. 31 19—*	*Increase or Decrease** *Amount*	*Per Cent*
Cash	$ 3,000.00	$ 4,000.00	$1,000.00	33.33
Accounts Receivable	17,000.00	19,000.00	2,000.00	11.77
Merchandise Inventory	21,000.00	23,000.00	2,000.00	9.52
Prepaid Insurance	800.00	400.00	400.00*	50.00*
Investments	6,000.00	7,000.00	1,000.00	16.66
Land	12,000.00	12,000.00		
Building and Machinery	19,000.00	19,000.00		
Furniture and Fixtures	3,000.00	3,500.00	500.00	16.66
Delivery Equipment	3,300.00	4,000.00	700.00	21.21
Goodwill	10,000.00	10,000.00		
	$95,100.00	$101,900.00	$6,800.00	7.15
Liabilities and Net Worth				
Accounts Payable	$12,000.00	$ 11,000.00	$1,000.00*	8.33*
Notes Payable	5,000.00	4,000.00	1,000.00*	20.00*
Bank Loan	4,000.00	5,000.00	1,000.00	25.00
Accrued Taxes	300.00	250.00	50.00*	16.66*
Accrued Wages	800.00	700.00	100.00*	12.50*
Mortgage on Land and Building	6,000.00	6,000.00		
Reserve for Depreciation on Building and Machinery	4,000.00	4,500.00	500.00	12.50
Reserve for Depreciation on Furniture and Fixtures	800.00	1,000.00	200.00	25.00
Reserve for Depreciation on Delivery Equipment	700.00	900.00	200.00	28.57
Capital Stock	50,000.00	50,000.00		
Surplus	11,500.00	18,550.00	7,050.00	61.30
	$95,100.00	$101,900.00	$6,800.00	7.15

Fig. 76

Comment on Foregoing Form. This plan has the advantage of showing changes in percentages, which express relationships in an understandable way. It is, however, subject to the same limitations as the preceding illustration as regards classification of assets and liabilities. The form shown in Fig. 78 avoids this limitation.

Form of Comparative Profit and Loss Statement. In preceding pages the manner of showing relative gross profit was illustrated. This same plan may be applied to the complete statement of profit and loss for two or more periods, as shown below (Fig. 77):

The Godfrey Company

COMPARATIVE STATEMENT OF PROFIT AND LOSS

	19—		19—		*Percentage*
	Amount	*Percentage Net Sales*	*Amount*	*Percentage Net Sales*	*Increase or Decrease**
Gross Sales...........	$183,200.00	102.0158	$197,313.00	101.2313	.7845*
Less Returns and Allowances..............	3,620.00	2 0158	2,400.00	1.2313	.7845*
Net Sales............	$179,580.00	100.0000	$194,913.00	100.0000	.0000
Less Cost of Goods Sold	127,318.00	70.8977	112,320.00	57.6257	13.2720
Gross Trading Profit...	$ 52,262.00	29.1023	$ 82,593.00	42.3743	13.2720
Less Operating Expense	26,130.00	14.5506	43,000.00	22.0611	7.5105
Net Trading Profit....	$ 26,132.00	14.5517	$ 39,593.00	20.3132	5.7615
Add Interest Income...	936.00	.5212	500.00	.2565	.2647*
	$ 27,068.00	15.0729	$ 40,093.00	20.5697	5.4968
Less Financial Expenses	430.00	.2391	620.00	.3181	.0790
Net Profit for Year....	$ 26,638.00	14.8338	$ 39,473.00	20.2516	5.4178

Fig. 77

Comments on the Form in Fig. 78. This arrangement has the advantage of showing changes in significant group totals, thus making possible certain important comparisons. Percentages of increase or decrease shown here but not in the preceding illustration are indicated in parentheses. Total current assets increased 11 per cent, whereas total current liabilities decreased 5.2 per cent. Trends are thus indicated by significant groups.

Comparative Statement of Cost of Goods Manufactured and Sold. The form for the comparative statement of cost of goods manufactured and sold is the same as for the comparative statement of profit and loss, of which it is merely a part, but displayed separately to permit the presentation of the statement of profit and loss in condensed form. On page 210, the form (Fig. 79) of comparative statement of cost of goods manufactured and sold shows percentages based on net sales as 100 per cent, also the increases and decreases in percentages based on net sales.

The Godfrey Company

Comparative Balance Sheet

Assets	*Dec. 31 19—*	*Dec. 31 19—*	*Increase or Decrease** *Amount*	*Per Cent*
Current Assets:				
Cash	$ 3,000.00	$ 4,000.00	$1,000.00	33 33
Accounts Receivable......	17,000.00	19,000.00	2,000.00	11 65
Merchandise Inventory ...	21,000.00	23,000.00	2,000.00	9.52
Prepaid Insurance.	800.00	400.00	400.00*	50 00*
Total Current Assets....	$41,800.00	$ 46,400.00	$4,600.00	(11.00)
Investments.................	6,000.00	7,000.00	1,000.00	16.66
	$47,800.00	$ 53,400.00	$5,600.00	
Fixed Assets:				
Land....................	$12,000.00	$ 12,000.00		
Building and Machinery...	19,000.00	19,000.00		
Furniture and Fixtures ...	3,000.00	3,500.00	500.00	16.66
Delivery Equipment.	3,300.00	4,000.00	700.00	21.21
Total Fixed Assets... .	$37,300.00	$ 38,500.00	$1,200.00	(3.21)
	$85,100.00	$ 91,100.00	$6,800.00	
Goodwill..................	10,000.00	10,000.00		
	$95,100.00	$101,900.00	$6,800.00	7.15

Fig. 78

The Godfrey Company

Comparative Balance Sheet

Liabilities	*Dec. 31 19—*	*Dec. 31 19—*	*Increase or Decrease** *Amount*	*Per Cent*
Current Liabilities:				
Accounts Payable.........	$12,000.00	$ 11,000.00	$1,000.00*	8 33*
Notes Payable......... ...	5,000.00	4,000.00	1,000.00*	20 00*
Bank Loan	4,000.00	5,000.00	1,000.00	25.00
Accrued Taxes...........	300.00	250.00	50.00*	16 66*
Accrued Wages	800.00	700.00	100.00*	12.50*
Total Current Liabilities	$22,100.00	$ 20,950.00	$1,150.00	(5.20)
Fixed Liabilities:				
Mortgage on Land and Building	$ 6,000.00	$ 6,000.00		
Total Liabilities...	$28,000.00	$ 26,950.00	$1,150.00	(4.09)
Reserves:				
Depreciation on Building and Machinery . .	$ 4,000.00	$ 4,500.00	$ 500.00	12.50
Depreciation on Furniture and Fixtures..... .	800.00	1,000.00	200.00	25.00
Depreciation on Delivery Equipment...	700.00	900.00	200.00	28.57
Total Reserves.........	$ 5,500.00	$ 6,400.00	$ 900.00	(16.36)
	$33,600.00	$ 33,350.00	$ 250.00*	
Net Worth:				
Capital Stock........ ...	$50,000.00	$ 50,000.00		
Surplus..................	11,500.00	18,550.00	$7,050.00	61.30
	$95,100.00	$101,900.00	$6,800.00	7.15

Fig. 78

The Godfrey Company

COMPARATIVE STATEMENT OF COST OF GOODS MANUFACTURED AND SOLD

	19— Amount	19— Percentage Mfg. Cost	19— Amount	19— Percentage Mfg. Cost	Percentage Increase or Decrease*
Raw Material Purchased	$ 67,300.00	52.2922	$ 62,300.00	49.6731	2.6191*
Add Inventory, Jan. 1..	30,400.00	23 6208	28,120.00	22 4207	1.2001*
	$ 97,700.00	75.9130	$ 90,420.00	72.0938	3.8192*
Less Inventory, Dec. 31.	33,700.00	26.1849	30,100.00	23.9994	2.1855*
Materials Put in Process	$ 64,000.00	49.7281	$ 60,320.00	48.0944	1.6337*
Manufacturing Expense	33,100.00	25.7187	36,000.00	28.7036	2.9849
Direct Labor.........	34,200.00	26.5734	32,100.00	25.5940	.9794*
Goods in Process, Jan. 1	10,500.00	8 1585	11,620.00	9.2648	1.1063
	$141,800.00	110.1787	$140,040.00	111.6568	1.4781
Less Goods in Process, Dec. 31............	13,100.00	10 1787	14,620.00	11.5668	1.4787
Cost of Goods Manufactured..............	$128,700.00	100.0000	$125,420.00	100.0000	0.0000
Finished Goods Inventory, Jan. 1.........	16,200.00	12.5874	4,200.00	3.3487	9.2387*
	$144,900.00	112.5874	$129,620.00	103.3487	9.2387*
Less Finished Goods Inventory, Dec. 1.....	17,582.00	13.6612	17,300.00	13 7937	.1325
Cost of Goods Sold....	$127,318.00	98.9262	$112,320.00	89.5550	9.3712*

Fig. 79

A. Manufacturing Expenses.

The Godfrey Company

COMPARATIVE STATEMENT OF MANUFACTURING EXPENSES

	19— Amount	19— Percentage Mfg. Cost	19— Amount	19— Percentage Mfg. Cost	Percentage Increase or Decrease*
Cost of Goods Manufactured..............	$128,700.00	100.0000	$125,420.00	100.000	
Heat, Light, and Power	$ 4,200.00	3.2634	$ 5,222.00	4.1636	.9002
Indirect Labor........	16,312.00	12.6744	18,900.00	15.0694	2.3950
Taxes..............	3,000.00	2.3310	3,000.00	2.3920	.0610
Insurance...........	720.00	.5594	720.00	.5741	.0147
Repairs..............	1,900.00	1.4763	2,100.00	1.6744	.1981
Depreciation on Building and Machinery..	4,000.00	3.1080	4,000.00	3.1893	.0813
Tools................	1,200.00	.9324	1,130.00	.9010	.0314*
Supplies............	1,768.00	1.3737	928.00	.7399	.6338*
	$ 33,100.00	25.7186	$ 36,000.00	28.7037	2.9851

Fig. 80

B. Selling Expenses.

The Godfrey Company

COMPARATIVE STATEMENT OF SELLING EXPENSES

	19—		19—		Percentage Increase or Decrease*
	Amount	*Percentage Net Sales*	*Amount*	*Percentage Net Sales*	
Net Sales	$179,580.00	100.0000	$194,913.00	100.0000	
Commissions	$ 4,200.00	2.3388	$ 7,312.00	3.7514	1.4126
Travel Expense	2,120.00	1.1805	3,600.00	1.8470	.6665
Salaries	5,092.00	2.8355	11,228.00	5.7605	2.9250
Advertising	2,700.00	1.5035	3,200.00	1.6418	.1383
	$ 14,112.00	7.8583	$ 25,340.00	13.0007	5.1424

Fig. 81

C. Administrative Expenses.

The Godfrey Company

COMPARATIVE STATEMENT OF ADMINISTRATIVE EXPENSES

	19—		19—		Percentage Increase or Decrease*
	Amount	*Percentage Net Sales*	*Amount*	*Percentage Net Sales*	
Net Sales	$179,580.00	100.0000	$194,913.00	100.0000	
Office Salaries	$ 9,000.00	5.0117	$ 14,000.00	7.1827	2.1710
Stationery and Printing	1,214.00	.6760	1,900.00	.9748	.2988
Office Supplies	879.00	.4895	512.00	.2627	.2268*
Depreciation	625.00	.3480	625.00	.3207	.0273*
Telephone and Telegraph	300.00	.1671		.3196	.1525
	$ 12,018.00	6.6923	$ 17,660.00	9.0605	2.3682

Fig. 81A

Comparative Expense Schedules. Comparative schedules of manufacturing, selling, and administrative expenses should be thrown into the same form for a given concern. These are illustrated in Figs. 80, 81, and 81A.

Analysis of Percentages and Ratios

Meaning of Analysis. The interpretation of data supplied by accounts, when placed on a quantitative basis, is termed analysis Through observation, comparisons may be made and mental note made thereof; but analysis in the strict sense requires that both the facts and the comparisons and conclusions based on the facts be reduced to accurate written statements.

Financial statements most suitable for purposes of analysis are those which: (1) are based on a correct classification of accounts; (2) have been correctly adjusted for the various valuation factors—depreciation, bad debts, and so on; (3) have been audited by independent public accountants. Any inaccuracy in the basic data results in corresponding inaccuracies in the conclusions based on their analysis.

Basic Data. The facts used in making comparisons and drawing conclusions may be termed the basic data of analysis. The possibilities of analysis are limited by the nature and accuracy of the basic facts.

Financial statements which reflect incorrect classifications of assets, liabilities, income, and expenses are of little or no value for purposes of analysis.

Character of Basic Data. The analyses to be considered in this chapter are made on data found in the balance sheet and statement of profit and loss, or on data which serves to amplify information found in these two statements.

As to the balance sheet, analysis may be based on percentages or ratios, or both, derived from a single balance sheet, or it may be based on percentages and ratios derived from comparative balance sheets.

As to the statement of profit and loss, analysis may be based on percentages or ratios, or both, derived from a single profit and loss statement; or it may be based on percentages or ratios or both, derived from comparative profit and loss statements. The same comments apply to component parts of the statement of profit and loss, such as statements of cost of goods manufactured and sold and schedules of expenses: (1) manufacturing expenses, (2) selling expenses, (3) administrative expenses, (4) financial expenses.

Outline of Analyses. The analyses to be made on the basis of this data will be explained in accordance with the following outline.

The student will find it a good exercise to refer to current corporation reports, applying thereto the principles of analysis explained in following pages.

PERCENTAGES

A Single balance sheet

Case 1. Significant percentages, as follows:

a) Percentage of each item to total of its group, as, for example, percentage of accounts receivable to total current assets, percentage of delivery equipment to total fixed assets; and so on See Fig 82.

b) Percentage of current assets to current liabilities (frequently expressed in ratio form and termed the current or working capital ratio).

c) Per cent of net worth to total liabilities.

d) Per cent of each valuation reserve to its corresponding asset.

B. Single statement of profit and loss

Case 2. Significant percentages, as follows:

a) Percentage of each item to net sales. See Fig. 83.

Case 3. Percentage of each item found in statement of cost of goods manufactured and sold to cost of goods manufactured See Fig. 84.

Case 4. Percentage of each item found in manufacturing expense schedule to.

a) Cost of goods manufactured. See Fig. 85.

b) Total of the schedule

Case 5. Per cent of each item in selling expense schedule to:

a) Net sales. See Fig. 86.

b) Total of the schedule

Case 6. Percent of each item in administration expense schedule to:

a) Net sales. See Fig. 87.

b) Total of the schedule

C Comparative balance sheet

Case 7. Increase or decrease in each item shown in amounts and in percentages. See Fig. 88. NOTE: The comparative balance sheet, with increases and decreases shown in amounts (dollars and cents), serves as the starting point for the setting up of a statement of funds derived and applied. This important method of analysis is given detailed consideration in Chapter 14.

D. Comparative statement of profit and loss

Case 8. Increase or decrease in each item in statement and expense schedules listed below, the increase or decrease in each case being expressed as the variation in percentages, computed on either:

(1) Cost of goods manufactured, or
(2) Net sales.

a) Statement of cost of goods manufactured and sold
b) Schedule of manufacturing expenses
c) Schedule of selling expenses
d) Schedule of administrative expense

The Godfrey Company

BALANCE SHEET

as at December 31, 19—

Assets

			Per Cent
Current Assets:			
Cash	$ 3,000.00		7.2
Accounts Receivable	17,000.00		40.6
Merchandise Inventory	21,000.00		50.3
Prepaid Insurance	800.00		1.9
Total Current Assets		$ 41,800.00	100.0
Investments		6,000.00	100.0
Fixed Assets:			
Land	$12,000.00		32.2
Building and Machinery	19,000.00		50.9
Furniture and Fixtures	3,000.00		8.0
Delivery Equipment	3,300.00		8.9
Total Fixed Assets		37,300.00	100.0
Goodwill		24,138.00	100.0
		$109,238.00	

Fig. 82

RATIOS

A. Balance sheet only (static ratios):

1) Current ratio (same as Case 1*b* above)
2) Net worth to debt ratio
3) Net worth to fixed assets ratio
4) Merchandise to receivables ratio
5) Cash and receivables to current debt ratio (acid test)

B. Balance sheet and statement of profit and loss (dynamic ratios):
   1) Net profit to net worth
   2) Net profit to total assets
   3) Cost of sales to average inventory (merchandise turnover)
   4) Sales to total assets (total capital turnover)
   5) Sales to receivables
   6) Sales to merchandise
   7) Sales to fixed assets
   8) Sales to net worth

The Godfrey Company

Balance Sheet

as at December 31, 19—

Liabilities

			Per Cent
Current Liabilities:			
Accounts Payable	$12,000.00		54 3
Notes Payable	5,000.00		22.6
Bank Loan	4,000.00		18.1
Accrued Taxes	300.00		1.4
Accrued Wages	800.00		3.6
Total Current Liabilities		$ 22,100.00	100.0
Fixed Liabilities:			
Mortgage on Land and Building		6,000.00	100.0
Reserves:			
Depreciation on Buildings and Machinery	$ 4,000.00		72.7
Depreciation on Furniture and Fixtures	800.00		14.6
Depreciation on Delivery Equipment	700.00		12 7
Total Reserves	....	5,500.00	100.0
Net Worth:			
Capital Stock	$50,000.00		65.2
Surplus	26,638.00		34.8
Total Net Worth	....	76,638.00	100.0
		$109,238.00	

Fig. 82

PERCENTAGE ANALYSIS ILLUSTRATED

Case 1. Percentages based on single balance sheet.

a) Percentage of each item to total of its group:

b) Percentage of current assets to current liabilities:

$41,800 ÷ $22,100 = 189.1 per cent

c) Percentage of net worth to total liabilities:

$76,638 ÷ $28,100 = 272.7 per cent

d) Percentage of each valuation reserve to its corresponding asset:
(1) Building and machinery (4,000÷19,000) is 21.5 per cent
(2) Furniture and fixtures (800÷ 3,000) is 26.6 per cent
(3) Delivery equipment (700÷ 3,300) is 21.2 per cent

Case 2. Percentage of each item to net sales.

The Godfrey Company

STATEMENT OF PROFIT AND LOSS

Year Ended December 31, 19—

		Percentage of Net Sales
Gross Sales	$183,200.00	102.0158
Less Returns and Allowances	3,620.00	2.0158
Net Sales	179,580.00	100.0000
Less Cost of Goods Sold	127,318.00	70.8977
Gross Trading Profit	52,262.00	29.1023
Less Operating Expenses	26,130.00	14.5506
Net Trading Profit	26,132.00	14.5517
Add Interest Income	936.00	.5212
	27,068.00	15.0729
Less Financial Expenses	430.00	.2391
Net Profit for Year	$ 26,638.00	14.8338

Fig. 83

Case 3. Percentage of each item in statement of cost of goods manufactured and sold to cost of goods manufactured.

The Godfrey Company

STATEMENT OF COST OF GOODS MANUFACTURED AND SOLD

Year Ended December 31, 19—

		Percentage of Mfg. Cost
Raw Material Purchased	$ 67,300.00	52.2922
Add Inventory, Jan. 1	30,400.00	23.6208
	97,700.00	75.9130
Less Inventory, Dec. 31	33,700.00	26.1849
Material Put in Process	64,000.00	49.7281
Manufacturing Expense	33,100.00	25.7187
Direct Labor	34,200.00	26.5734
Goods in Process, Jan. 1	10,500.00	8.1585
Cost of Goods in Process	141,800.00	110.1787
Less Goods in Process, Dec. 31	13,100.00	10.1787
Cost of Goods Manufactured	128,700.00	100.0000
Add Finished Goods Inventory, Jan. 1	16,200.00	12.5874
	144,900.00	112.5874
Less Finished Goods Inventory, Dec. 31	17,582.00	13.6612
Cost of Goods Sold	$127,318.00	98.9262

Fig. 84

Case 4. Percentage of each item in manufacturing expense schedule to:

a) Cost of goods manufactured

b) Total of the schedule

The Godfrey Company

Schedule of Manufacturing Expenses

Year Ended December 31, 19—

		Percentage of Manufacturing Cost	*Percentage of*
Cost of Goods Manufactured.......	$128,700.00	100.0000	*$33,100.00*
Heat, Light, and Power...........	5,400.00	4.1958	16.3142
Indirect Labor...................	16,312.00	12.6744	49.2809
Taxes..........................	3,000.00	2.3310	9.0634
Insurance......................	720.00	.5594	2.1752
Repairs........................	1,900.00	1.4763	5.7401
Depreciation—Building...........	4,000.00	3.1080	12.0846
Tools..........................	1,768.00	1.3737	5.3415
	$ 33,100.00	25.7186	100.0000

Fig. 85

Case 5. Percentage of each item in selling expense schedule to:

a) Net sales

b) Total of the schedule

The Godfrey Company

Schedule of Selling Expenses

Year Ended December 31, 19—

		Percentage of Net Sales	*Percentage of*
Net Sales.......................	$179,580.00	100.0000	*$14,112.00*
Commissions....................	$ 4,200.00	2.3388	29.7548
Travel Expense..................	2,120.00	1.1805	15.0226
Salaries........................	5,092.00	2.8355	36.0820
Advertising.....................	2,700.00	1.5035	19.1326
	$ 14,112.00	7.8583	100.0000

Fig. 86

Case 6. Percentage of each item in administrative expense schedule to:

a) Net sales

b) Total of the schedule

The Godfrey Company

Schedule of Administrative Expenses

Year Ended December 31, 19—

		Percentage of Net Sales	*Percentage of*
Net Sales	$179,580.00	100 0000	72,081 00
Office Salaries	$ 9,000.00	5.0117	74 8876
Stationery and Printing	1,214.00	.6760	10.1015
Office Supplies	879.00	4895	7.3140
Depreciation	625.00	.3480	5.2005
Telephone and Telegraph	300.00	.1671	2.4962
	$ 12,018.00	6 6923	100 0000

Fig. 87

Case 7. Increase or decrease in each item in comparative balance sheet shown in amounts and in percentages.

The Godfrey Company

Comparative Balance Sheet

Assets	*Dec. 31 19—*	*Dec. 31 19—*	*Increase or Decrease** *Amount*	*Per Cent*
Cash	$ 3,000.00	$ 4,000.00	$1,000.00	33.33
Accounts Receivable	17,000.00	19,000.00	2,000.00	11.65
Merchandise Inventory	21,000 00	23,000.00	2,000.00	9 52
Prepaid Insurance	800.00	400.00	400.00*	50 00*
Investments	6,000.00	7,000.00	1,000.00	16 66
Land	12,000.00	12,000.00		
Building and Machinery	19,000.00	19,000.00		
Furniture and Fixtures	3,000.00	3,500.00	500.00	16 66
Delivery Equipment	3,300.00	4,000.00	700.00	21 21
Goodwill	24,138.00	24,138.00		
	$109,238.00	$116,038.00		
Liabilities				
Accounts Payable	$ 12,000.00	$ 11,000.00	$1,000.00*	8 33*
Notes Payable	5,000.00	4,000.00	1,000.00*	20 00*
Bank Loan	4,000.00	5,000.00	1,000.00	25 00
Accrued Taxes	300.00	250.00	50.00*	16 66*
Accued Wages	800.00	700.00	100.00*	12 50*
Mortgage on Land and Building	6,000.00	6,000.00		
Reserve for Depreciation on Building	4,000.00	4,500.00	500.00	12 50
Reserve for Depreciation on Furniture and Fixtures	800.00	1,000.00	200.00	25.00
Reserve for Depreciation on Delivery Equipment	700.00	900.00	200.00	28 57
Capital Stock	50,000.00	50,000.00		
Surplus	26,638.00	32,688.00	6,050.00	22 78
	$109,238.00	$116,038.00		

Fig. 88

Ratio Analysis Illustrated

Static Ratios—Balance Sheet Only. The following ratios are based on the balance sheet shown on pages 214 and 215.

1. Current ratio, found by dividing total current assets ($41,800.00) by total current liabilities ($22,100.00) is 1.89. This is the same as saying that the current ratio is 1.89 to 1.

2. Net worth to debt ratio, found by dividing net worth ($76,638.00) by total liabilities ($28,100.00), is 2.72.

3. Net worth to fixed assets ratio, found by dividing net worth ($76,638.00) by total fixed assets ($37,300.00–$5,500.00 depr. reserves) is 1.93.

4. Merchandise to receivables ratio, found by dividing merchandise ($21,000.00) by receivables ($17,000.00), is 1.23.

5. Cash and receivables to current debt ratio, found by dividing total of cash and receivables ($20,000.00) by total current liabilities ($22,100.00) is .90.

This last ratio is termed the "acid test" because cash and receivables are the only assets immediately available, or soon to become available, for the liquidation of current liabilities.

Dynamic Ratios—Balance Sheet and Statement of Profit and Loss. The following ratios are based on the balance sheet shown on pages 214 and 215 and the statement of profit and loss shown on page 216.

1. Net profit to net worth ratio, found by dividing net profit ($26,638.00) by net worth ($76,638.00), is .35.

2. Net profit to total assets, found by dividing net profit ($26,638.00) by total assets ($103,738.00)* is .26.

3. Cost of sales to average inventory (merchandise turnover) cannot be found from data given. Assuming average inventory to be $18,400.00, the desired result is secured by dividing cost of sales ($127,318.00) by $18,400.00, which gives 6.4.

4. Sales to total assets (total capital turnover), found by dividing net sales ($179,580.00) by total net assets ($103,738.00), is 1.73.

5. Sales to receivables, found by dividing net sales ($17,580.00) by account receivable ($17,000.00), is 10.56.

*Shown net, i.e., less depreciation reserves.

6. Sales to merchandise, found by dividing net sales ($179,-580.00) by net fixed assets ($37,300.00−$5,500.00) is 8.55.

7. Sales to fixed assets, found by dividing net sales ($179,580.00) by net fixed assets ($37,300.00−$5,500.00), is 5.65.

8. Sales to net worth, found by dividing net sales ($179,580.00) by net worth ($76,638.00), is 2.34.

Interpreting Changes in Profit

Causes of Changes in Profit. The causes of changes in net profit may be outlined as follows: (1) increase or decrease in net sales, (2) increase or decrease in cost of sales, (3) increase or decrease in operating expenses, (4) increase or decrease in non-operating expenses, (5) increase or decrease in non-operating income.

The increase or decrease shown in two successive years is usually the result of changes in each of the first three divisions; that is, in comparing results in two successive years it is likely that a variation in net profit will be fully accounted for only by recognizing increases and decreases in net sales, cost of sales, and expenses.

Changes in Unit Prices. Net sales may: (1) increase, (2) decrease, (3) remain constant, and at the same time selling price per unit may or may not change. Usually unit cost and unit selling prices are not available, so that analysis must stop with a consideration of changes in total cost of goods sold and total sales. However, illustrations showing analysis based on changes in unit prices will be given.

Outline of Cases. The cases which follow illustrate:

1. Increase in sales, the percentage of cost of goods sold to sales remaining unchanged in each year.

2. Decrease in sales, the percentage of cost of goods to sales remaining unchanged in each year.

3. Increase in cost of goods sold, sales remaining the same in each year.

4. Decrease in cost of goods sold, sales remaining the same in each year.

5. Increase in sales accompanied by increase in rate of gross profit.

6. Increase in sales accompanied by decrease in rate of gross profit.

7. Decrease in sales accompanied by increase in rate of gross profit.

8. Decrease in sales and decrease in rate of gross profit.

9. In 8, above, it is known that in the first year 2,700 units were sold, and in the second year 3,100 units were sold.

10. Increase in sales, no change in gross profit rate.

11. Changes in expenses of operation and in non-operating income.

Case 1.

The Globe Company

COMPARATIVE STATEMENT OF PROFIT AND LOSS

Years Ending December 31, 19— and December 31, 19—

	19—		19—		*Increase or Decrease**	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Net Sales.....	$150,000.00	100 00	$250,000 00	100.00	$100,000.00	
Less Cost of Goods Sold	105,000 00	70 00	175,000 00	70 00	70,000 00	
Gross Trading Profit ..	$ 45,000.00	30 00	$ 75,000 00	30 00	$ 30,000.00	

Increase in gross trading profit is $30,000.00.

Analysis: Increase in gross trading profit due to

(1) increase in sales (30 per cent of $100,000.00) = $30,000.00

Case 2.

(Title omitted)

	19—		19—		*Increase or Decrease**	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Net Sales.....	$150,000.00	100 00	$100,000.00	100 00	$50,000 00*	
Less Cost of Goods Sold..	105,000 00	70 00	70,000.00	70 00	35,000 00*	
Gross Trading Profit	$ 45,000 00	30 00	$ 30,000.00	30 00	$15,000.00*	

Decrease in gross trading profit is $15,000.00.

Analysis: Decrease in gross trading profit due to

(1) decrease in sales (30 per cent of $50,000.00) = $15,000.00

Case 3.

(Title omitted)

	19—		19—		*Increase or Decrease**	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Net Sales.....	$150,000.00	100.00	$150,000.00	100 00		
Less Cost of Goods Sold..	105,000.00	70.00	120,000.00	80.00	$15,000.00	10.00
Gross Trading Profit.. .. .	$ 45,000.00	30 00	$ 30,000.00	20 00	$15,000.00	10.00*

Decrease in gross trading profit is $15,000.00.

Analysis: Decrease in gross trading profit due to:

(1) increase in cost of goods sold (10 per cent of $150,000.00) = $15,000.00

Case 4.

(Title omitted)

	19—		19—		*Increase or Decrease**	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Net Sales.....	$150,000.00	100.00	$150,000.00	100.00		
Less Cost of Goods Sold .	105,000.00	70.00	90,000.00	60.00	$15,000.00*	10.00*
Gross Trading Profit.......	$ 45,000.00	30 00	$ 60,000.00	40.00	$15,000.00	10 00

Increase in gross trading profit is $15,000.00.

Analysis: Increase in gross trading profit due to:

(1) decrease in cost of goods sold (10 per cent of $150,000.00) = $15,000.00

Case 5.

(Title omitted)

	19—		19—		*Increase or Decrease**	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Net Sales	$150,000.00	100.00	$200,000.00	100.00	$50,000.00	
Less Cost of Goods Sold .	105,000.00	70.00	120,000.00	60.00	15,000.00	10 00*
Gross Trading Profit.......	$ 45,000.00	30.00	$ 80,000.00	40.00	$35,000.00	10 00

Increase in gross trading profit is $35,000.00.

Analysis: Increase in gross trading profit due to:

(1) increase in sales		
(30 per cent of $50,000.00)	=	$15,000.00
(2) increase in rate of gross profit		
(10 per cent of $200,000.00)	=	20,000.00
		$35,000.00

Case 6. (Title omitted)

	19—		19—		*Increase or Decrease**	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Net Sales.....	$150,000.00	100.00	$200,000.00	100.00	$50,000.00	
Less Cost of Goods Sold	105,000.00	70.00	160,000.00	80.00	55,000.00	10.00
Gross Trading Profit.......	$ 45,000.00	30.00	$ 40,000.00	20.00	$ 5,000.00*	10.00*

Decrease in gross trading profit is $5,000.00.

Analysis: Decrease in gross trading profit due to:

(1) increase in sales		
(30 per cent of $50,000.00)	=	$15,000.00
(2) decrease in rate of gross profit		
(10 per cent of $200,000.00)	=	20,000.00*
		$ 5,000.00*

Case 7. (Title omitted)

	19—		19—		*Increase or Decrease**	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Net Sales.....	$150,000.00	100.00	$100,000.00	100.00	$50,000.00*	
Less Cost of Goods Sold..	105,000.00	70 00	60,000.00	60.00	45,000.00*	10.00
Gross Trading Profit	$ 45,000.00	30.00	$ 40,000.00	40.00	$ 5,000.00*	10.00

Decrease in gross trading profit is $5,000.00.

Analysis: Decrease in gross trading profit due to:

(1) decrease in sales		
(30 per cent of $50,000.00)	=	$15,000.00*
(2) increase in rate of gross profit		
(10 per cent of $100,000.00)	=	10,000.00
		$ 5,000.00

Case 8.

(Title omitted)

	19—		19—		*Increase or Decrease**	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Net Sales.....	$150,000.00	100 00	$100,000.00	100 00	$50,000.00*	
Less Cost of Goods Sold .	105,000.00	70 00	80,000.00	80 00	25,000.00*	10.00
Gross Trading Profit......	$ 45,000 00	30 00	$ 20,000 00	20 00	$25,000 00*	10 00*

Decrease in gross trading profit is $25,000.00.

Analysis: Decrease in gross trading profit due to:

(1) decrease in sales (30 per cent of $50,000.00)	=	$15,000.00*
(2) decrease in rate of gross profit (10 per cent of $100,000.00)	=	10,000.00*
		$25,000.00

Case 9. In cases 1–8 nothing is said about changes in selling price and cost price of a unit. If it be assumed, in Case 1, that the selling price per unit in each year is $20.00, then the number of units sold in 19— is $150,000.00 divided by $20.00 equals 7,500 units; and in 19—, $250,000.00 divided by $20.00 equals 12,500 units.

Assume that the numbers of units sold are as follows:

Year	*No. of Units Sold*
19—.	7,500
19—............	15,000

If total sales are as stated above, then selling prices are as follows:

	19—	19—
Each unit sells for:		
In 19— ($150,000.00÷ 7,500).	$20.00	
In 19— ($250,000.00÷15,000)		$16.67
Each unit costs:		
In 19— ($105,000.00÷ 7,500)....	14.00	
In 19— ($175,000.00÷15,000)		11 67
Gross profit per unit...........	$ 6.00	$ 5 00

Increase in gross profit is $30,000.00.

Analysis: Increase in gross profit due to:

(1) increase in number of units sold ($7,500×$6.00) = $45,000.00

Decrease in gross profit due to:

(1) decrease in selling price ($3.33×15,000) = – 50,000.00

Increase in gross profit due to:

(1) decrease in unit cost of goods sold ($2.33×15,000) = 35,000.00

$30,000.00

Comment on Foregoing Cases. As a rule, unit cost and selling prices are not obtainable, so that the analysis is limited to a statement explaining gross profit change as a result of one or more of the following factors: (1) increase in sales, (2) decrease in sales, (3) increase in cost of goods sold, (4) decrease in cost of goods sold, (5) increase in rate of gross profit, (6) decrease in rate of gross profit.

Changes in unit price are involved in 3, 4, 5, and 6, but cannot be explained, as in Case 9, either because unit cost and selling prices are not known, or because, if known, they differ for different units, so that they cannot be made the basis of further analysis. Note that analysis may be made of total costs and sales, ignoring known changes in unit prices. Thus, the following analysis is based on sales and cost of sales used in Case 9.

Case 10.

(Title omitted)

	19—		19—		*Increase or Decrease**	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Net Sales. . .	$150,000.00	100 00	$250,000 00	100.00	$100,000.00	
Less Cost of Goods Sold. .	105,000.00	70 00	175,000.00	70.00	70,000.00	
Gross Trading Profit	$ 45,000.00	30.00	$ 75,000.00	30.00	$ 30,000.00	

Increase in gross profit is $30,000.00.

Analysis: Increase in gross profit due to:

(1) increase in sales (30 per cent of $100,000.00) = $30,000.00

Here the increase in gross profit is ascribed entirely to increase in sales, in the absence of any knowledge of varying unit prices.

Case 11. Preceding illustrations have been limited to the consideration of gross profit changes. In analyzing net profit changes it is necessary to consider increases and decreases in expenses. For this purpose it is necessary to have a complete comparative statement of profit and loss, with increases and decreases shown in percentages based on net sales. The analysis which follows is based on the following comparative statement of profit and loss:

The Globe Company

COMPARATIVE STATEMENT OF PROFIT AND LOSS

Years Ending December 31, 19— and December 31, 19—

	19—		19—		*Increase or Decrease**	
	Amount	*Per Cent*	*Amount*	*Per Cent*	*Amount*	*Per Cent*
Net Sales...	$150,000.00	100.00	$200,000.00	100.00	$50,000.00	
Less Cost of Goods Sold.	105,000.00	70.00	120,000.00	60 00	15,000.00	10.0000*
Gross Trading Profit....	$ 45,000.00	30.00	$ 80,000.00	40.00	$35,000.00	10.0000
Less Operating Expense:						
Selling....	10,000.00	6.6667	14,000.00	7.00	4,000.00	.3333
Administrative. ..	5,000.00	3.3333	4,000.00	2.00	1,000.00*	1.3333*
Total Expenses...	$ 15,000.00	10.0000	$ 18,000.00	9.00	$ 3,000.00	1.0000*
Net Operating Profit......	$ 30,000.00	20.0000	$ 62,000.00	31.00	$32,000.00	11.0000
Interest Income	1,000.00	0.6667	800.00	0 40	200.00*	.2667*
Net Profit....	$ 31,000.00	20.6667	$ 62,800.00	31.40	$31,800.00	10.7333

Increase in net profit is $31,800.00.

Analysis: Increase in gross trading profit due to:

(1) increase in sales (30 per cent of $50,000.00)	=	$15,000.00
(2) increase in rate of gross profit (10 per cent of $200,000.00)	=	20,000.00
Increase in gross trading profit (see Case 5)...............		$35,000.00

(3) Less		
(*a*) increase in selling expense....	.$4,000.00	
(*b*) decrease in interest income	200.00	4,200.00
		$30,800.00
(4) Plus		
(*a*) decrease in administrative expense		1,000.00
Net profit............		$31,800.00

The Profit Index. The margin of gross profit varies in different lines of merchandising. Thus, in the grocery business, it is in the neighborhood of 20 per cent; that is, cost of sales is about 80 per cent of net sales. In the jewelry business gross profit is about 40 per cent of sales, or twice that of the grocery business. If, however, the money invested in groceries can be turned over twice as rapidly as that invested in jewelry, the results will be equal. By multiplying the gross profit margin by the rate of turnover, a gross profit index is secured whereby the comparative effectiveness of a particular line of business may be judged.

Thus, if the rates of turnover per year for the jewelry business and grocery business, respectively, are 1 and 10, the gross profit indexes are:

Jewelry....	$.40 \times 1 = 40$
Groceries	$.20 \times 10 = 200$

thus indicating that, under these gross profit margins and turnover rates, the grocery business is 5 times more profitable than the jewelry business. This does not mean that the net profits of the grocery business will necessarily be five times more favorable than net profits of the jewelry business, since operating expenses may not be proportionate for the two kinds of business. It merely presents a comparison of the two lines of business from the point of view of gross profits.

Chapter 14

FUNDS DERIVED AND APPLIED

Limitations of Comparative Balance Sheets. The comparative balance sheet was explained and illustrated in Chapter 13. Its value is great, but unless properly interpreted, sometimes with the aid of supplementary data, an adequate summary of the changes which occur between two balance sheet dates is impossible. Reference to the comparative balance sheet shown on page 205 illustrates this point.

The balance sheet of December 31, 19—, shows a surplus of \$11,500.00; that of December 31, 19—, shows a surplus of \$18,550.00. No additional data being available, it would be assumed that the increase of \$7,050.00 (\$18,550.00 − \$11,500.00) represents the net profit for the year 19—.

Assume that a 5 per cent dividend on the outstanding capital stock was declared and paid during the year. This is not reflected on the comparative balance sheet, although paying a dividend is an application of funds. A statement of changes of a fundamental character would be inadequate without mention being made of this use of funds and also of the source of such funds.

Again, assume that during the year an item of furniture and fixtures which cost \$400.00 was charged against the reserve for depreciation on furniture and fixtures. This fact is not indicated on the comparative balance sheet, and the amount set aside for depreciation is not shown, because the increase in the reserve from \$800.00 to \$1,000.00 is net after the charge of \$400.00 is made against the reserve. The amount reserved is \$200.00 plus \$400.00, or \$600.00.

A statement of funds derived and applied which will show, in readily understandable form, not only the changes evident on the face of the comparative balance sheet, but also those indicated by supplementary information, is needed.

Status of Working Capital. The various current assets and current liabilities are subject to constant change, so that the significant variation in this division of the balance sheet is in the difference between current assets and current liabilities, known as working capital. A change in working capital means a change in other divisions of the balance sheet. A change in amount in a given current asset or current liability may not affect working capital, and hence have no effect in other divisions of the balance sheet. The purchase of merchandise is an illustration.

For this reason, in the statement of funds derived and applied, a distinction is made between changes in specific items and changes in working capital.

Outline of Cases. Below are outlined the cases illustrated in this chapter which require no adjustments:

Group A.

Case 1. Funds derived from:
- *a*) Net profit

Applied to:
- *a*) Increase in working capital
- *b*) Increase in fixed assets

Case 2. Funds derived from:
- *a*) Decrease in working capital and
- *b*) Net profit

Applied to:
- *a*) Investments in securities

Case 3. Funds derived from:
- *a*) Sale of securities
- *b*) Net profit

Applied to:
- *a*) Increase working capital

Case 4. Funds derived from:
- *a*) Decrease in working capital

Applied to:
- *a*) Net loss for period
- *b*) Increase in fixed assets

Comments on Cases 1–4. Cases 1–4 typify balance sheet changes which are: (1) obvious upon examination of the comparative balance sheets; (2) not affected by current adjustments which change the net profit but require no immediate expenditure of funds.

Need for Adjustments. Frequently, it is necessary to make adjustments in the comparative balance sheet in order to secure a

(Text continued on page 236.)

Cases Illustrated.

Case 1. Below (Fig. 89) is shown the comparative balance sheet of the Newman corporation. Required, a statement of funds derived and applied.

The Newman Corporation

COMPARATIVE BALANCE SHEET

Assets	*Dec. 31, 19—*	*Dec. 31, 19—*	*Increase or Decrease**
Cash	$ 700.00	$ 2,000.00	$1,300.00
Merchandise	13,600.00	15,500.00	1,900.00
Accounts Receivable	10,700.00	11,600.00	900.00
Land	3,000.00	3,000.00	
Buildings	10,600.00	14,600.00	4,000.00
Delivery Equipment	2,900.00	2,900.00	
	$41,500.00	$49,600.00	$8,100.00
Liabilities			
Accounts Payable	$16,000.00	$19,100.00	$3,100.00
Mortgage	4,000.00	4,000.00	
Capital Stock	15,000.00	15,000.00	
Surplus	6,500.00	11,500.00	5,000.00
	$41,500.00	$49,600.00	$8,100.00

Fig. 89

The Working Papers. The analysis needed to set up a statement of funds derived and applied is made on working papers (Fig. 90) with columns provided to display working capital changes as well as the details of all changes of a fundamental character reflected on the comparative balance sheet.

The Newman Corporation

WORKING PAPERS

Showing Funds Derived and Applied

	Balance Sheet		Working Capital		Funds	
	Dec. 31, 19—	Dec. 31, 19—	Increase	Decrease	Applied	Derived
Assets						
Cash	700.00	2,000.00	1,300.00			
Merchandise	13,600.00	15,500.00	1,900.00			
Accounts Receivable	10,700.00	11,600.00	900.00			
Land	3,000.00	3,000.00				
Buildings	10,600.00	14,600.00			4,000.00	
Delivery Equipment	2,900.00	2,900.00				
	41,500.00	49,600.00				
Liabilities						
Accounts Payable	16,000.00	19,100.00		3,100.00		
Mortgage	4,000.00	4,000.00				
Capital Stock	15,000.00	15,000.00				
Surplus	6,500.00	11,500.00				5,000.00
	41,500.00	49,600.00				
Increase in Working Capital				1,000.00	1,000.00	
			4,100.00	4,100.00	5,000.00	5,000.00

Fig. 90

Case 2. In this and the following cases the comparative balance sheet is shown only on the working papers used to make the analysis.

The Newman Corporation

Working Papers

Showing Funds Derived and Applied

	Balance Sheet December 31		Working Capital		Funds	
	19—	19—	Increase	Decrease	Applied	Derived
Assets						
Cash	700.00	800.00	100.00			
Merchandise	13,600.00	15,500.00	1,900.00			
Accounts Receivable	10,700.00	11,600.00	900.00			
Land	3,000.00	3,000.00				
Buildings	10,600.00	10,600.00				
Delivery Equipment	2,900.00	2,900.00				
Securities Owned		5,200.00			5,200.00	
	41,500.00	49,600.00				
Liabilities						
Accounts Payable	16,000.00	19,100.00		3,100.00		
Mortgage	4,000.00	4,000.00				
Capital Stock	15,000.00	15,000.00				
Surplus	6,500.00	11,500.00				5,000.00
	41,500.00	49,600.00				
Decrease in Working Capital			200.00			200.00
			3,100.00	3,100.00	5,200.00	5,200.00

Fig. 91

Case 3.

The Newman Corporation

WORKING PAPERS

Showing Funds Derived and Applied

	Balance Sheet December 31		Working Capital		Funds	
	19—	19—	Increase	Decrease	Applied	Derived
Assets						
Cash	700.00	7,000.00	6,300.00			
Merchandise	13,600.00	15,500.00	1,900.00			
Accounts Receivable	10,700.00	11,600.00	900.00			
Land	3,000.00	3,000.00				
Buildings	10,600.00	10,600.00				
Delivery Equipment	2,900.00	2,900.00				
Securities Owned	5,200.00					5,200.00
	46,700.00	50,600.00				
Liabilities						
Accounts Payable	16,000.00	19,100.00		3,100.00		
Mortgage	4,000.00	4,000.00				
Capital Stock	15,000.00	15,000.00				
Surplus	11,700.00	12,500.00				800.00
	46,700.00	50,600.00				
Increase in Working Capital				6,000.00	6,000.00	
			9,100.00	9,100.00	6,000.00	6,000.00

Fig. 92

Case 4.

The Newman Corporation

WORKING PAPERS

Showing Funds Derived and Applied

	Balance Sheet December 31		Working Capital		Funds	
	19—	19—	Increase	Decrease	Applied	Derived
Assets						
Cash	700.00	500.00		200.00		
Merchandise	13,600.00	10,000.00		3,600.00		
Accounts Receivable	10,700.00	8,000.00		2,700.00		
Land	3,000.00	5,000.00			2,000.00	
Buildings	10,600.00	16,600.00			6,000.00	
	38,600.00	40,100.00				
Liabilities						
Accounts Payable	16,000.00	19,100.00		3,100.00		
Mortgage	4,000.00	4,000.00				
Capital Stock	15,000.00	15,000.00				
Surplus	3,600.00	2,000.00			1,600.00	
	38,600.00	40,100.00				
Decrease in Working Capital			9,600.00			9,600.00
			9,600.00	9,600.00	9,600.00	9,600.00

Fig. 93

The results of the analysis for Case 1, Fig. 90, are as follows:

The Newman Corporation

STATEMENT OF FUNDS DERIVED AND APPLIED

Year Ended December 31, 19—

Funds derived:	
a) Increase in Surplus (Net Profit)	$5,000.00
Funds applied:	
a) Increase in Working Capital	$1,000.00
b) Increase in Fixed Assets	4,000.00
	$5,000.00

The results of the analysis for Case 2, Fig. 91, are as follows:

The Newman Corporation

STATEMENT OF FUNDS DERIVED AND APPLIED

Year Ended December 31, 19—

Funds derived:	
a) Net Profit (Increase in Surplus)	$5,000.00
b) Decrease in Working Capital	200.00
	$5,200.00
Funds applied:	
a) Securities Purchased	$5,200.00

The results of the analysis for Case 3, Fig. 92, are as follows:

The Newman Corporation

STATEMENT OF FUNDS DERIVED AND APPLIED

Year Ended December 31, 19—

Funds derived:	
a) Net Profit (Increase in Surplus)	$ 800.00
b) Securities Sold	5,200.00
	$6,000.00
Funds applied:	
a) Increase in Working Capital	$6,000.00

The results of the analysis for Case 4, Fig. 93, are as follows:

The Newman Corporation

STATEMENT OF FUNDS DERIVED AND APPLIED

Year Ended December 31, 19—

Funds Derived:		
a) Decrease in Working Capital		$9,600.00
Funds Applied:		
a) Net Loss (Decrease in Surplus)		$1,600.00
b) Increase in Fixed Assets:		
Land	$2,000 00	
Buildings	6,000.00	8,000.00
		$9,600.00

true statement of funds derived and applied. Such adjustments are either: (1) those which are evident from an examination of the comparative balance sheet, or (2) those which are based on data not found in the comparative balance sheet. The first two cases below fall under (1); the last three fall under (2).

Outline of Cases.

Case 1. At the end of the year an allowance for depreciation on buildings and on delivery equipment was made, the proper depreciation reserve accounts being credited.

Case 2. At the end of the year organization expense was written off against profit and loss.

Case 3. During the year an item of equipment was charged against the reserve for depreciation.

Case 4. During the year a dividend on the capital stock was declared and paid.

Case 5. During the year a revaluation of buildings was made, surplus being written up as a result.

Cases Illustrated.

Case 1. Fig. 94 shows the comparative balance sheet of the Newman Corp. Required, a statement of funds derived and applied.

The Newman Corporation

COMPARATIVE BALANCE SHEET

Assets	*Dec. 31, 19—*	*Dec. 31, 19—*	*Increase or Decrease**
Cash	$ 700.00	$ 2,000.00	$1,300.00
Merchandise	13,600.00	15,500.00	1,900.00
Accounts Receivable	10,700.00	11,600.00	900.00
Land	3,000.00	3,000.00	
Buildings	10,600.00	14,600.00	4,000.00
Delivery Equipment	2,900.00	2,900.00	
	$41,500.00	$49,600.00	$8,100.00
Liabilities			
Accounts Payable	$16,000.00	$19,100.00	$3,100.00
Mortgage	4,000.00	4,000.00	
Reserve for Depreciation—Buildings	3,000.00	4,000.00	1,000.00
Reserve for Depreciation — Delivery Equipment	600.00	1,000.00	400.00
Capital Stock	15,000.00	15,000.00	
Surplus	2,900.00	6,500.00	3,600.00
	$41,500.00	$49,600.00	$8,100.00

Fig. 94

The Newman Corporation

WORKING PAPERS

Showing Funds Derived and Applied

	Balance Sheet December 31		Adjustments		Working Capital		Funds	
	19—	19—	Dr.	Cr.	Increase	Decrease	Applied	Derived
Assets								
Cash	700.00	2,000.00			1,300.00			
Merchandise	13,600.00	15,500.00			1,900.00			
Accounts Receivable	10,700.00	11,600.00			900.00			
Land	3,000.00	7,000.00					4,000.00	
Buildings	10,600.00	10,600.00						
Delivery Equipment	2,900 00	2,900.00						
	41,500.00	49,600.00						
Liabilities								
Accounts Payable	16,000.00	19,100.00				3,100.00		
Mortgage	4,000.00	4,000.00						
Reserve for Depreciation—Buildings	3,000.00	4,000.00	(1) 1,000.00					
Reserve for Depreciation—Delivery Equipment	600.00	1,000.00	(2) 400.00					
Capital Stock	15,000.00	15,000.00						
Surplus	2,900.00	6,500 00		(1) 1,000.00 (2) 400.00				5,000.00
	41,500.00	49,600.00						
Increase in Working Capital						1,000.00	1,000.00	
			1,400.00	1,400.00	4,100.00	4,100.00	5,000.00	5,000.00

Fig. 95

Case 2. Of organization expense, $2,000.00 was written off at the end of the year 19—.

The Newman Corporation

WORKING PAPERS

Showing Funds Derived and Applied

	Balance Sheet December 31		Adjustments		Working Capital		Funds	
	19—	19—	Dr.	Cr.	Increase	Decrease	Applied	Derived
Assets								
Cash	700.00	2,000.00			1,300.00			
Merchandise	13,600.00	15,500.00			1,900.00			
Accounts Receivable	10,700.00	11,600.00			900.00			
Land	3,000.00	7,000.00					4,000.00	
Buildings	10,600.00	10,600.00						
Delivery Equipment	2,900.00	2,900.00						
Organization Expense	4,000.00	2,000.00	(3) 2,000.00					
	45,500.00	51,600.00						
Liabilities								
Accounts Payable	20,000.00	21,000.00				1,100.00		
Mortgage	4,000.00	4,000.00						
Reserve for Depreciation—Buildings	3,000.00	4,000.00	(1) 1,000.00					
Reserve for Depreciation—Delivery Equipment	600.00	1,000.00	(2) 400.00					
Capital Stock	15,000.00	15,000.00						
Surplus	2,900.00	6,500.00		(1) 1,000.00 (2) 400.00 (3) 2,000.00				7,000.00
	45,500.00	51,600.00						
Increase in Working Capital						3,000.00	3,000.00	
			3,400.00	3,400.00	4,100.00	4,100.00	7,000.00	7,000.00

Fig. 96

Case 3.

The Newman Corporation
WORKING PAPERS
Showing Funds Derived and Applied

	Balance Sheet December 31		Adjustments		Working Capital		Funds	
	19—	19—	Dr.	Cr.	Increase	Decrease	Applied	Derived
Assets								
Cash	700.00	2,000.00			1,300.00			
Merchandise	13,600.00	15,500.00			1,900.00			
Accounts Receivable	10,700.00	11,600.00			900.00			
Land	3,000.00	7,000.00					4,000.00	
Buildings	10,600.00	10,600.00						
Delivery Equipment	2,900.00	2,600.00	(1) 300.00					
Organization Expense	4,000.00	2,000.00	(4) 2,000.00					
	45,500.00	51,300.00						
Liabilities								
Accounts Payable	20,000.00	21,100.00				1,100.00		
Mortgage	4,000.00	4,000.00						
Reserve for Depreciation—Buildings	3,000.00	4,000.00	(2) 1,000.00					
Reserve for Depreciation—Delivery Equipment	600.00	700.00	(3) 400.00	(1) 300.00				
Capital Stock	15,000.00	15,000.00		(2) 1,000.00				
Surplus	2,900.00	6,500.00		(3) 400.00 (4) 2,000.00				7,000.00
	45,500.00	51,300.00						
Increase in Working Capital						3,000.00	3,000.00	
			3,700.00	3,700.00	4,100.00	4,100.00	7,000.00	7,000.00

Fig. 97

Case 4. During the year a dividend of 10 per cent on the capital stock was declared and paid; also, $300.00 was charged off against the depreciation reserve for an item of delivery equipment, as in Case 3.

The Newman Corporation

WORKING PAPERS

Showing Funds Derived and Applied

	Balance Sheet December 31		Adjustments		Working Capital		Funds	
	19—	19—	Dr.	Cr.	Increase	Decrease	Applied	Derived
Assets								
Cash	700.00	2,000.00			1,300.00			
Merchandise	13,600.00	15,500.00			1,900.00			
Accounts Receivable	10,700.00	11,600.00			900.00			
Land	3,000.00	7,000.00					4,000.00	
Buildings	10,600.00	10,600.00						
Delivery Equipment	2,900.00	2,600.00	(1) 300.00					
Organization Expense	4,000.00	2,000.00	(4) 2,000.00					
	45,500.00	51,300.00						

Fig. 98.—*Continued on Facing Page.*

Liabilities								
Accounts Payable	20,000.00	21,100.00				1,100.00		
Mortgage	4,000.00	4,000.00						
Reserve for Depreciation—								
Buildings	3,000.00	4,000.00	(2) 1,000.00					
Reserve for Depreciation—								
Delivery Equipment . . .	600.00	700.00	(3) 400.00	(1) 300.00				
Capital Stock	15,000.00	15,000.00						
Surplus	2,900.00	6,500.00		(2) 1,000.00 (3) 400.00 (4) 2,000.00 (5) 1,500.00				8,500.00
	45,500.00	51,300.00						
Dividend Paid			(5) 1,500.00				1,500.00	
Increase in Working Capital						3,000.00	3,000.00	
			5,200.00	5,200 00	4,100.00	4,100.00	8,500.00	8,500.00

Fig. 98

Note: Adjustment No. 5 is made to add the amount of the dividend back to surplus and to show the application of this sum in paying the dividend.

Case 5. During the year a revaluation of buildings was made, surplus being written up $5,000.00 in consequence. Other changes are as in Case 4.

The Newman Corporation

WORKING PAPERS

Showing Funds Derived and Applied

	Balance Sheet December 31		Adjustments		Working Capital		Funds	
	19—	19—	Dr.	Cr.	Increase	Decrease	Applied	Derived
Assets								
Cash	700.00	2,000.00			1,300.00			
Merchandise	13,600.00	15,500.00			1,900.00			
Accounts Receivable	10,700 00	11,600.00			900.00			
Land	3,000.00	7,000.00					4,000.00	
Buildings	10,600.00	15,600.00		(1) 5,000.00				
Delivery Equipment	2,900.00	2,600.00	(2) 300.00					
Organization Expense	4,000.00	2,000.00	(5) 2,000.00					
	45,500.00	56,300.00						

Fig. 99—Continued on Facing Page.

Liabilities								
Accounts Payable	20,000.00	21,100.00				1,100.00		
Mortgage	4,000.00	4,000.00						
Reserve for Depreciation—								
Buildings	3,000.00	4,000.00	(3) 1,000.00					
Reserve for Depreciation—								
Delivery Equipment	600.00	700.00	(4) 400.00	(2) 300.00				
Capital Stock	15,000.00	15,000.00						
Surplus	2,900.00	11,500.00	(1) 5,000.00	(3) 1,000.00				
				(4) 400.00				
				(5) 2,000.00				
				(6) 1,500.00				8,500.00
	45,500.00	56,300.00						
Dividend Paid			(6) 1,500.00				1,500.00	
Increase in Working Capital						3,000.00	3,000.00	
			10,200.00	10,200.00	4,100.00	4,100.00	8,500.00	8,500.00

Fig. 99

NOTE: Adjustment No. 1 is made to reverse the entry made when Buildings account and Surplus account were written up. Neither provision nor application of funds results from a book entry of this character. The results of the analysis are the same as in Case 4.

The balance sheet, Case 1, Fig. 94, shows that $1,000.00 depreciation has been charged off on buildings and $400.00 on delivery equipment. This is shown in depreciation reserves.

The Working Papers. When adjustments are required before amounts derived and applied can be shown, working papers should contain columns wherein adjustments may be made. See Fig. 95.

The results of the analysis of Case 1 are as follows:

The Newman Corporation

STATEMENT OF FUNDS DERIVED AND APPLIED

Year Ended December 31, 19—

Funds derived:	
Net Profit (Increase in Surplus)	$3,600.00
Add Back:	
Depreciation Written Off	1,400.00
	$5,000.00
Funds applied:	
Increase in Working Capital	$1,000.00
Land Purchased	4,000.00
	$5,000.00

The results of the analysis of Case 2, Fig. 96, are as follows:

The Newman Corporation

STATEMENT OF FUNDS DERIVED AND APPLIED

Year Ended December 31, 19—

Funds derived:		
Net Profit (Increase in Surplus)		$3,600.00
Add Back:		
Depreciation Written Off	$1,400.00	
Organization Expense Amortized	2,000.00	3,400.00
		$7,000.00
Funds applied:		
Increase in Working Capital		$3,000.00
Land Purchased		4,000.00
		$7,000.00

Case 3. During the year the corporation charged off against the delivery equipment depreciation reserve an item of $300.00, Fig. 97.

NOTE: Adjustment No. 1, Fig. 97, is made so that depreciation reserve will show the amount set aside for depreciation, viz., $400.00. This done, the procedure and resulting analysis agree with Case 2.

The results of the analysis of Case 4, Fig. 98, are as follows:

The Newman Corporation

STATEMENT OF FUNDS DERIVED AND APPLIED

Year Ended December 31, 19—

Funds derived:		
Net Profit (increase in surplus)		$3,600.00
Add Back:		
Depreciation Written Off	$1,400.00	
Organization Expense Amortized	2,000.00	
Dividend Declared	1,500.00	4,900.00
		$8,500.00
Funds applied:		
Increase in Working Capital		$3,000.00
Land Purchased		4,000.00
Dividend Paid		1,500.00
		$8,500.00

Case 5 is shown as Fig. 99.

Schedule of Working Capital Changes. Although the net change in working capital is shown in the statement of funds derived and applied as one sum, it is sometimes desirable to set up a schedule of changes in working capital, by putting in tabular form the data found in the working capital columns of the working papers. Thus, the working papers given in Case 5 provide data as follows:

The Newman Corporation

SCHEDULE OF WORKING CAPITAL CHANGES

Year Ended December 31, 19—

Increases:	
Cash	$1,300.00
Merchandise	1,900.00
Accounts Receivable	900.00
	$4,100.00
Decreases:	
Accounts Payable	1,100.00
Net Increase in Working Capital	$3,000.00

Fig. 100

Comment on Cases 1–5. Cases 1–5 typify balance sheet changes which (1) are not necessarily obvious upon examination of the comparative balance sheet; (2) may be affected by current adjustments which change net profit but require no immediate outlay of funds.

Chapter 15

BRANCH ACCOUNTING

Nature of Branch Organization. Proper geographical distribution of output may render necessary some form of branch organization. A branch may, or may not, be incorporated. If incorporated, the relationship of controlling company and subsidiary is established. Frequently, it is not desirable to incorporate branches. The form of the branch organization is devised to meet local requirements, hence it may be: (1) largely self-governing, with its own complete financial records; (2) largely self-governing, but without complete records of its own; (3) merely a selling agency, acting on instructions from the home office, and reporting all transactions to the home office by means of duplicate papers describing these transactions in detail.

Branches may be established abroad, in which event there arise certain problems relative to foreign exchange, since it is necessary to transact business in the currency of the country in which operations are carried on.

In this chapter attention will be given to the operation of domestic branches, in accordance with the following outline: (1) selling agencies, (2) branches keeping their own records.

SELLING AGENCIES

Organization. A selling agency is a kind of extension of the home office through which the home office transacts business with people at a distance. It is necessary to have an agency manager who may be aided by one or more assistants, but he acts in accordance with detailed instructions from the home office and transmits to the home office such detailed descriptions of his transactions as will enable the home office to keep as complete a record thereof as if the transactions had been carried out at the home office.

For reference, and for his own protection, the agency manager should keep duplicate copies of all communications with the home office. The agency may keep a stock of merchandise from which to make deliveries, or all goods may be shipped from the home office. Distance from the home office, the character of the goods dealt in, and the time allowed in which to make deliveries to the customer are factors to be considered.

Since all records are kept at the home office and since it is desirable to ascertain the results achieved by each agency, the home office books must be devised to show sales, returned sales, cost of goods sold, and expenses, by agencies.

For this purpose special columns should be employed for each agency in the following books: (1) sales journal, (2) return sales journal, (3) cash receipts book.

This plan permits the keeping of a separate customers ledger for each agency, also the keeping in the general ledger of separate Sales and Return Sales accounts for each agency.

If the voucher register is used, an expense column for each agency should be kept, the headings being *Agency A Expense*, *Agency B Expense*, and so on. By coding the agency expenses and providing a "code" column in conjunction with each agency expense column, as great analysis of agency expenses as may be desired is made possible.

The method of ascertaining cost of goods sold for each agency varies with circumstances:

1. If purchases are allocated to agencies when made, a special column for each agency should be kept in the purchases journal entitled *Agency A*, *Agency B*, and so on. This plan necessitates the determination of inventories by agencies at the end of the accounting period.

2. If all purchases of merchandise are charged to a general Purchases account, this account is credited and *Agency A Purchases*, *Agency B Purchases*, and so on, are charged, as merchandise is allocated to the various agencies.

Branches

Organization. The organization of branches varies with circumstances. Some of the variations are:

1. The branch is given complete control of all records, so that it is able to close its own books, and set up its own statement of profit and loss and balance sheet, which it submits to the home office.

2. The branch is required to keep a complete set of books, but merchandise is billed to the branch at a figure other than cost, so that the branch is unable to ascertain its own profit.

Under these circumstances it is customary for the branch to submit a trial balance to the home office, where the necessary adjustments are made and the results of the branch operations determined and consolidated with the home office accounts.

The branch closes its expense and revenue accounts into its account with the home office, as explained later.

Establishing a Branch. When the home office determines to establish a branch, it sends a representative, usually the future branch manager, to make the necessary arrangements. Merchandise and perhaps necessary equipment will be sent to him, as well as the funds necessary to commence operations.

Assume that the Apex Corporation, with its main office and plant in Chicago, desires to establish a branch in Denver. It sends a representative to Denver to make arrangements and forwards to him $15,000.00 cash, and $20,000.00 merchandise at cost price. On the home office books the entry is:

March 1, 19—		
Denver Branch	*35,000.00*	
Cash		*15,000.00*
Purchases		*20,000.00*
For advances to Denver branch.		

The entry on the Denver branch books, made perhaps a week later, is:

March 8, 19—		
Cash	*15,000.00*	
Purchases—Home Office	*20,000.00*	
Home Office		*35,000.00*
For advances from Home Office.		

Operations of Branch. Continuing the foregoing illustration, assume that the branch transactions for March are as summarized below:

1. Goods sent from home office, at cost, $33,000.00.
2. Goods returned to home office, at cost, $1,500.00.

3. Purchases of furniture and fixtures by branch, $1,727.00, cash.
4. Purchases of delivery equipment by branch, $1,500.00, cash.
5. Purchases of merchandise by branch from other sources than home office, on account, $10,000.00, and for cash, $4,000.00.
6. Expenses paid by branch office, $3,729.00.
7. Sales, on account, $27,000.00, and for cash, $4,500.00.
8. Of the sales made on account, $3,700.00 is collected during March.
9. The branch remits $5,000.00 to the home office.

The entries to record these transactions on branch and home office books are as follows:

Branch Office Books			Home Office Books		
(1)			(1)		
Purchases—Home Office	*33,000.00*		*Denver Branch*	*33,000.00*	
Home Office		*33,000.00*	*Purchases*		*33,000.00*
(2)			(2)		
Home Office	*1,500.00*		*Purchases*	*1,500.00*	
Purchases—Home Office		*1,500.00*	*Denver Branch*		*1,500.00*
(3)			(3)		
Furniture and Fixtures	*1,727.00*		*No entry.*		
Cash		*1,727.00*			
(4)			(4)		
Delivery Equipment	*1,500.00*		*No entry.*		
Cash		*1,500.00*			
(5)			(5)		
Purchases—Outside	*14,000.00*		*No entry.*		
Cash		*4,000.00*			
Accounts Payable		*10,000.00*			
(6)			(6)		
Expenses	*3,729.00*		*No entry.*		
Cash		*3,729.00*			
(7)			(7)		
Accounts Receivable	*27,000.00*		*No entry.*		
Cash	*4,500.00*				
Sales		*31,500.00*			
(8)			(8)		
Cash	*3,700.00*		*No entry.*		
Accounts Receivable		*3,700.00*			
(9)			(9)		
Home Office	*5,000.00*		*Cash*	*5,000.00*	
Cash		*5,000.00*	*Denver Branch*		*5,000.00*

On the home office books the account with the branch now appears thus:

Denver Branch

19—				19—			
March	*Cash*		*15,000 00*	*March*	*Branch Office (Returns)*		*1,500 00*
	Purchases		*20,000 00*		*Branch Office (Cash)*		*5,000 00*
	Purchases		*33,000 00*				

Below are shown the accounts of the branch in "T" form:

Cash

15,000.00	1,727.00
4,500.00	1,500.00
3,700.00	4,000.00
	3,729.00
	5,000.00

Delivery Equipment

1,500.00	

Purchases—Home Office

20,000.00	1,500.00
33,000.00	

Purchases—Outside

14,000.00	

Home Office

1,500.00	35,000.00
5,000.00	33,000.00

Accounts Payable

	10,000.00

Furniture and Fixtures

1,727.00	

Expenses

3,729.00	

Accounts Receivable

27,000.00	3,700.00

Sales

	31,500.00

A trial balance of the branch books as at March 31, 19—, is as follows:

Apex Corporation—Denver Branch

TRIAL BALANCE

as at March 31, 19—

Home Office		61,500.00
Furniture and Fixtures	1,727.00	
Delivery Equipment	1,500.00	
Expenses	3,729.00	
Sales		31,500.00
Purchases—Home Office	51,500.00	
Purchases—Outside	14,000.00	
Cash	7,244.00	
Accounts Payable		10,000.00
Accounts Receivable	23,300.00	
	103,000.00	103,000.00

Fig. 101

The inventory of merchandise on hand, at the Denver branch, March 31, 19—, is $7,000.00 outside goods and $33,700.00 home office goods.

The results of the branch operations, as well as the entries necessary to close the branch books, are reflected in the working papers shown in Fig. 102.

The closing entries on the branch books are:

(7)

Profit and Loss	*28,529.00*	
Expenses		*3,729.00*
Purchases—Home Office		*17,800.00*
Purchases—Outside		*7,000.00*
To close.		

(2)

Sales	*31,500.00*	
Profit and Loss		*31,500.00*
To close.		

(3)

Profit and Loss	*2,971.00*	
Home Office		*2,971.00*
To close.		

The net profit is carried to the Home Office account because the branch has no Net Worth account of its own. Since the branch is owned by the home office it must account to the home office for all of its profits.

On the home office books the entry required to take up this profit of the branch is:

Denver Branch	*2,971.00*	
Profit of Denver Branch		*2,971.00*
To take up profit of this Branch for March.		

The Profit of Denver Branch account will be closed into the home office Profit and Loss account when the home office books are closed, which will be done after reports of the earnings of all branches have been received and entered on the home office books.

Assume that the Voltex Corporation, with its main office and plant in Chicago, desires to establish a branch in Kansas City. Its

WORKING PAPERS

Denver Branch

Month Ending March 31, 19—

Account	Trial Balance		Adjustments		Profit and Loss		Balance Sheet	
Home Office		61,500.00						61,500.00
Furniture and Fixtures	1,727.00						1,727.00	
Delivery Equipment	1,500.00						1,500.00	
Expenses	3,729.00				3,729.00			
Sales		31,500.00				31,500.00		
Purchases—Home Office	51,500.00			(1) 33,700.00	17,800.00			
Purchases—Outside	14,000.00			(2) 7,000.00	7,000.00			
Cash	7,244.00						7,244.00	
Accounts Payable		10,000.00						10,000.00
Accounts Receivable	23,300.00						23,300.00	
Inventory—Home Office Goods 3/31			(1) 33,700.00				33,700.00	
Inventory—Outside Goods 3/31			(2) 7,000.00				7,000.00	
Net Profit					2,971.00			2,971.00
	103,000.00	103,000.00	40,700.00	40,700.00	31,500.00	31,500.00	74,471.00	74,471.00

Fig. 102

representative makes the necessary arrangements, and the home office forwards $15,000.00 in cash and merchandise (cost price $20,000.00) which it bills to the branch at $25,000.00. On the home office books the entry is:

March 1, 19—		
Kansas City Branch	*40,000.00*	
Cash		*15,000.00*
Sales to Kansas City Branch.		*25,000.00*
For advances to Kansas City Branch, merchandise being billed at 125 per cent of cost.		

The entry on the branch books on, say, March 8, is:

March 8, 19—		
Cash	*15,000.00*	
Goods from Home Office	*25,000.00*	
Home Office		*40,000.00*
For advances from Home Office.		

The branch should be instructed to distinguish between goods shipped from home office and goods purchased from other sources, because of the arbitrary price attaching to goods received from home office.

Operations of Agency. Continuing the foregoing illustration, assume that the branch transactions for March are as summarized below:

1. Goods sent from home office (cost $33,000.00) billed at 125 per cent of cost, or $41,250.00.
2. Goods returned to home office (cost $1,500) at billed price, $1,875.00.
3. Purchases of furniture and fixtures by branch, $1,727.00, cash.
4. Purchases of delivery equipment by branch, $1,500.00, cash.
5. Purchases of merchandise by branch from other sources than home office, on account, $10,000.00, and for cash, $4,000.00.
6. Expenses paid by branch office, $3,729.00.
7. Sales, on account, $27,000.00, and for cash $4,500.00. Of the sales made on account, $3,700.00 is collected during March.
8. The branch remits $5,000.00 to the home office.

The entries to record these transactions on branch and home office books are as follows:

Branch Office Books			Home Office Books		
(1)			(1)		
Goods from Home Office	41,250.00		*Kansas City Branch*	41,250.00	
Home Office		41,250.00	*Sales to Branch*		41,250.00
(2)			(2)		
Home Office	1,875.00		*Sales to Branch*	1,875.00	
Goods from Home Office		1,875.00	*Kansas City Branch*		1,875.00
(3)			(3)		
Furniture and Fixtures	1,727.00		*No entry.*		
Cash		1,727.00			
(4)			(4)		
Delivery Equipment	1,500.00		*No entry.*		
Cash		1,500.00			
(5)			(5)		
Purchases	14,000.00		*No entry.*		
Cash		4,000.00			
Accounts Payable		10,000.00			
(6)			(6)		
Expenses	3,729.00		*No entry.*		
Cash		3,729.00			
(7)			(7)		
Accounts Receivable	27,000.00		*No entry.*		
Cash	4,500.00				
Sales		31,500.00			
Cash	3,700.00				
Accounts Receivable		3,700.00			
(8)			(8)		
Home Office	5,000.00		*Cash*	5,000.00	
Cash		5,000.00	*Kansas City Branch*		5,000.00

On the home office books the account with the branch now appears thus:

Kansas City Branch

19—					19—				
		Cash		75,000.00			*Branch Office (Returns)*		1,875.00
		Sales to Branch (125 per cent of cost)		25,000.00			*Branch Office (Cash)*		5,000.00
		Sales to Branch (125 per cent of cost)		41,250.00					

A trial balance of the branch books as at March 31, 19—, is as follows:

Voltex Corporation—Kansas City Branch

TRIAL BALANCE

as at March 31, 19—

Home Office		74,375.00
Furniture and Fixtures	1,727.00	
Delivery Equipment	1,500.00	
Expenses	3,729.00	
Sales		31,500.00
Purchases	14,000.00	
Goods from Home Office	64,375.00	
Cash	7,244.00	
Accounts Payable		10,000.00
Accounts Receivable	23,300.00	
	115,875.00	115,875.00

The inventory of the branch consists of two parts, as follows:

Inventory of Goods Purchased	7,000.00
Inventory of Goods Shipped from Home Office, Billed Price (125 per cent of cost)	42,125.00

Since the branch does not know the cost of the goods shipped from the home office, it cannot ascertain its gross profit. It can, however, close all nominal accounts into the Home Office account through the following entries:

(1)

Inventory of Goods Purchased	7,000.00	
Inventory of Goods from Home Office	42,125.00	
Purchases		7,000.00
Goods from Home Office		42,125.00

To close.

(2)

Home Office	32,979.00	
Expenses		3,729.00
Purchases—Outside		7,000.00
Goods from Home Office		22,250.00

To close.

(3)

Sales	31,500.00	
Home Office		31,500.00

To close.

After these entries are posted, a trial balance of the branch ledger is as follows:

Home Office		*72,896.00*
Furniture and Fixtures	*1,727.00*	
Delivery Equipment	*7,500.00*	
Cash	*7,244.00*	
Accounts Payable		*10,000.00*
Accounts Receivable	*23,300.00*	
Inventory—Goods Purchased	*7,000.00*	
Inventory—Goods Shipped from Home Office	*42,125.00*	
	82,896.00	*82,896.00*

The Kansas City branch forwards its trial balance before closing, together with amounts of closing inventories of goods purchased outside ($7,000.00) and goods shipped from home office ($42,125.00) to the branch office.

Since the home office knows the percentage applied to the cost of goods shipped to the branch to determine the billing price, it is able to compute the gross and net profit made by the branch, as shown in the statement on opposite page:

Key to adjustments:

(1)		
Inventory—Purchases Outside	*7,000.00*	
Purchases—Outside		*7,000.00*
For inventory of goods purchased outside on hand March 31.		
(2)		
Inventory—Goods from Home Office	*42,125.00*	
Goods from Home Office		*42,125.00*
For inventory of goods from Home Office at 125 per cent of cost.		
(3)		
Home Office	*8,425.00*	
Inventory—Goods from Home Office		*8,425.00*
To eliminate excess of billed price over cost from goods from Home Office in branch inventory (20 per cent of 42,125.00).		
(4)		
Home Office	*4,450.00*	
Goods from Home Office		*4,450.00*
To eliminate excess of billed price over cost, from goods sold by branch (20 per cent of 22,250).		

On the books of the home office an entry is made to incorporate the profit of the branch, thus:

Kansas City Branch	*2,971.00*	
Profit of Kansas City Branch		*2,971.00*
To take up branch profit.		

Kansas City Branch

Working Papers

Month Ended March 31, 19—

	Trial Balance		Adjustments		Profit and Loss		Balance Sheet	
Home Office		74,375.00	(3) 8,425.00					61,500.00
			(4) 4,450.00					
Furniture and Fixtures	1,727.00						1,727.00	
Delivery Equipment	7,500.00						7,500.00	
Expenses	3,729.00				3,729.00			
Sales		31,500.00				31,500.00		
Purchases—Outside	14,000.00			(1) 7,000.00	7,000.00			
				(4) 4,450.00				
Goods from Home Office	64,375.00			(2) 42,125.00	17,800.00			
Cash	7,244.00						7,244.00	
Accounts Payable		10,000.00						10,000.00
Accounts Receivable	23,300.00						23,300.00	
Inventory Purchases—Outside			(1) 7,000.00				7,000.00	
Inventory—Goods from Home Office			(2) 42,125.00	(3) 8,425.00			33,700.00	
Net Profit					2,971.00			2,971.00
	115,875.00	115,875.00	62,000.00	62,000.00	31,500.00	31,500.00	74,471.00	74,471.00

Fig. 103

The balance in the Kansas City Branch account on the home office books is now \$77,346.00, whereas the balance in the Home Office account on the Kansas City branch books is \$72,896.00. The difference (\$77,346.00 − \$72,896.00), or \$4,450.00, is the excess of the billed price of goods sold by the branch over the actual cost of goods sold by the branch (see adjustment (4) on foregoing working papers).

To bring these accounts into agreement, the following entry is made on the home office books:

Sales to Kansas City Branch	*4,450.00*	
Kansas City Branch		*4,450.00*
To eliminate excess of billed price over cost from sales to branch sold by branch.		

This reduces the balance in the Kansas City Branch account on the home office books to \$72,896.00, which agrees with the balance in the Home Office account on the Kansas City branch books.

Consolidation of Balance Sheets. The balance sheets of home office and branch may be consolidated in the same manner as those of holding company and subsidiary, viz., by eliminating inter-office obligations and profits. Figs. 104 and 105 illustrate the procedure where goods are shipped to branch at cost and at cost plus.

Foreign Branch Accounting

Operations Abroad. The profit to be derived from the exchange of commodities between nations may induce corporations carrying on their principal activities in one country to establish branches in other countries. Such foreign branches transact business in the currency of the country in which they operate. This fact gives rise to problems which must be considered in the establishment and operation of foreign branches.

The Rate of Exchange. The monetary unit of a country possesses a value which is due to either: (*a*) its intrinsic worth, or (*b*) its worth as fixed by law.

Thus, under (*a*) the value of a gold coin is determined by the amount of gold it contains, while under (*b*) the value of a greenback is fixed by law. The value of a greenback in terms of other money say gold, may be less than its face amount.

WORKING PAPERS

To Consolidate Home Office and Branch Balance Sheets

	Home Office Balance Sheet	Kansas City Balance Sheet	Eliminations	Consolidated Balance Sheet
Kansas City Branch	64,471.00		(1) 64,471.00	
Furniture and Fixtures	3,680.00	1,727.00		5,407.00
Delivery Equipment	4,800.00	1,500.00		6,300.00
Cash	30,000.00	7,244.00		37,244.00
Inventory	156,000.00	33,700.00		189,700.00
Inventory—Goods Purchased		7,000.00		7,000.00
Accounts Receivable	89,700.00	23,300.00		113,000.00
	348,651.00	74,471.00	64,471.00	358,651.00
Home Office		64,471.00	(1) 64,471.00	
Accounts Payable	33,000.00	10,000.00		43,000.00
Capital Stock	200,000.00			200,000.00
Surplus	115,651.00			115,651.00
	348,651.00	74,471.00	64,471.00	358,651.00

Fig. 104

Key to eliminations:

(1)

Home Office	64,471.00	
Kansas City Branch		64,471.00

To eliminate interoffice debts.

The procedure to consolidate these statements when goods are shipped to branch at 125 per cent of cost is illustrated below:

WORKING PAPERS
To Consolidate Home Office and Branch Balance Sheets

	Home Office Balance Sheet	Kansas City Balance Sheet	Eliminations	Consolidated Balance Sheet
Kansas City Branch	72,896.00		(1) 72,896.00	
Furniture and Fixtures	3,680.00	1,727.00		5,407.00
Delivery Equipment	4,800.00	1,500.00		6,300.00
Cash	30,000.00	7,244.00		37,244.00
Inventory	156,000.00	42,125.00	(2) 8,425.00	189,700.00
Inventory—Goods Purchased		7,000.00		7,000.00
Accounts Receivable	89,700.00	23,300.00		113,000.00
	357,076.00	82,896.00	81,321.00	358,651.00
Home Office		72,896.00	(1) 72,896.00	
Accounts Payable	33,000.00	70,000.00		43,000.00
Capital Stock	200,000.00			200,000.00
Surplus	124,076.00		(2) 8,425.00	115,651.00
	357,076.00	82,896.00	81,321.00	358,651.00

Fig. 105

Key to eliminations:

(1)

Home Office	72,896.00	
Kansas City Branch		72,896.00

To eliminate interoffice debts.

(2)

Surplus	8,425.00	
Inventory		8,425.00

To eliminate interoffice profit in inventory due to sales to branch at 125 per cent of cost.

When transferring funds abroad it is necessary to make the exchange at the rate currently prevailing in the market for foreign money.

Thus, if one desires to send $4,000.00 to London to be used there to carry on business transactions, he purchases as many pounds as the current rate of exchange on London permits. Shortly after the devaluation of the United States gold dollar in January, 1934, the exchange on London stood at $4.985 and on Paris at 6.35 cents, and has since fluctuated in accordance with the influences which determine those ratios from day to day.

In times of war, or when drastic revision of monetary standards is being made, the rates may be expected to undergo sharp fluctuations. These fluctuations in exchange rates sometimes introduce an element of profit or loss difficult to evaluate accurately, because of the uncertainty of such fluctuations.

To illustrate, assume that on February 1 the current rate of exchange on London is $5.00 and that $10,000.00 is used to purchase pounds at that rate. This amounts to $10,000.00 ÷ 5, or £2,000. Next, assume that on February 2 the rate of exchange on London is $5.02. If the £2,000 were converted back into United States money, the amount secured would be £2,000 times 5.2, or $10,040.00. Whether such a profit results depends on what is done with the £2,000 obtained.

If it is used in business in England no profit results from current fluctuations in the exchange rate. When, however, statements of operating results are sent to the United States to be incorporated with home office statements, it becomes necessary to apply such rates of exchange as will reflect, in dollars, the results of the transactions entered on the English branch books in pounds.

The exact results of branch operations are determined only after a branch has been completely liquidated and the remaining balance of cash transmitted to the home office, thus being exchanged into dollars.

At intermediate dates it is desirable to compute the results of branch operations as nearly as possible in terms of domestic money. This renders necessary the conversion of the items in the branch trial balance at rates thought most appropriate.

Gains and losses due to fluctuations in exchange rates are more or less arbitrary because of the possibility of fluctuations in the reverse direction before the loss or gain is made permanent through exchange into dollars.

Form of Organization of Foreign Branch. The form of organization of a foreign branch depends on various considerations. Thus, it may be incorporated or unincorporated, accordingly as incorporation in the country in question is advantageous or disadvantageous.

Establishment of Foreign Branch Illustrated. Assume that the International Corporation has its headquarters in New York and decides to establish a London branch to act as a selling agency for products of the New York plant and to engage in the purchase and sale of goods of English manufacture.

On April 1 the home office purchases a draft on London for $10,000.00, the rate of exchange being $5.00.

The entry on the home office books is:

April 1		
London Branch	*$10,000.00*	
Cash		*$10,000.00*
Remittance to London.		

The entry made by the London branch manager on his books, on April 8, 19—, is:

April 8		
Cash	*£2,000*	
Home Office		*£2,000*
Remittance from New York.		

London Branch Transactions. The transactions of the London branch for April are summarized below:

1. Goods shipped from home office, cost price, $30,600.00. On the date these goods were received the rate of exchange on London was $5.10. The conversion was effected at that rate.
2. Goods purchased from London jobbers, on account, £6,000.
3. Goods sold, on account, £5,000; and for cash, £1,150.
4. Collections from customers, £900.
5. Remittance to home office, £1,000, the rate of exchange being $5.15.
6. Remittance from home office, $498.00, the rate of exchange being $4.98.
7. Expenses paid in cash by London office, £336.
8. Branch buys furniture and fixtures, £400, for cash.

The entries on the London and home office books for these transactions are as follows:

London Branch Books			New York Office Books		
April 8			*April 1*		
Cash.............	*£2,000*		*London Branch.......*	*$10,000.00*	
Home Office.......		*£2,000*	*Cash............*		*$10,000.00*
Remittance from New York.			*Remittance to London.*		
Goods from Home Office	*£6,000*		*London Branch.......*	*$30,600.00*	
Home Office		*£6,000*	*Purchases.........*		*$30,600.00*
Received from home office, rate being $5.10.			*Shipments to branch, rate being $5.10.*		
Purchases...........	*£6,000*				
Creditors.........		*£6,000*	*No entry.*		
Goods bought.					
Cash..............	*£7,500*				
Customers...........	*5,000*		*No entry.*		
Sales............		*£6,500*			
Goods sold.					
Cash..............	*£ 900*				
Customers.........		*£ 900*	*No entry.*		
Collections.					
Home Office.........	*£1,000*		*Cash..............*	*$ 5,150.00*	
Cash............		*£1,000*	*London Branch.....*		*$ 5,150.00*
Remittances, rate $5.15.			*Remittance from London, rate being $5.15.*		
Cash..............	*£ 100*		*London Branch.......*	*$ 498.00*	
Home Office.......		*£ 100*	*Cash............*		*$ 498.00*
Remittance from home office, rate being $4.98.			*Remittance to London, rate being $4.98.*		
Expenses...........	*£ 336*				
Cash............		*£ 336*	*No entry.*		
Expenses paid.					
Furniture and Fixtures.	*£ 400*				
Cash............		*£ 400*			
Purchased in London.			*No entry.*		

The London Branch account on the New York books now stands as follows:

London Branch

19—				19—			
Apr.	*1*	*Cash........*	*10,000.00*	*Apr.*	*1–30*	*Cash.......*	*5,150.00*
	1–30	*Purchases.....*	*30,600.00*				
	1–30	*Cash........*	*498.00*				

The balance of this account is $35,948.00.

The trial balance of the London branch books is as follows:

International Corporation—London Branch

TRIAL BALANCE

as at April 30, 19—

Cash	£ 2,764	
Furniture and Fixtures	400	
Home Office Account		£ 7,100
Goods from Home Office	6,000	
Expenses	336	
Purchases	6,000	
Creditors		6,000
Customers	4,100	
Sales		6,500
	£19,600	£19,600

The London branch closing inventories are:

1. Goods from home office, £4,000. *2. Goods purchased from England, £3,500.*

Branch Procedure to Close. In closing its books the branch may follow either of two alternatives: (a) it may set up its own profit and loss statement and balance sheet, forwarding these statements to the home office to be consolidated with the home office statements, or, (*b*) it may send a copy of its preclosing trial balance to the home office, where it is interpreted. In this event it is necessary to prepare the branch books to receive the next month's transactions by closing all nominal items into the Home Office account.

There are other possible variations. Thus, if the home office ships goods to the branch at an arbitrary figure, the branch cannot compute its own profit, and it would be necessary for the home office to adjust the Goods from Home Office account on the branch trial balance to ascertain branch results.

Case 1. Assuming that the London branch is to close its books by setting up a Profit and Loss account, the procedure is as shown in the working papers shown as Fig. 106.

The adjusting entries on the London books are:

	(1)	
Inventory—Goods from Home Office	£4,000	
Goods from Home Office		£4,000
Closing inventory of goods from Home Office.		
	(2)	
Inventory—Purchased in England	£3,500	
Purchases		£3,500
Closing inventory of goods purchased in England.		

London Branch

WORKING PAPERS

Month Ended April 30, 19—

	Trial Balance		Adjustments		Profit and Loss		Balance Sheet	
Furniture and Fixtures	£ 400						£ 400	
Cash	2,764						2,764	
Home Office Account		£ 7,100						£ 7,100
Goods from Home Office	6,000			(1) £4,000	£ 2,000			
Expenses	336				336			
Purchases	6,000			(2) 3,500	2,500			
Creditors		6,000						6,000
Customers	4,100						4,100	
Sales		6,500				£ 6,500		
Inventories:								
Goods from Home Office			(1) £4,000				4,000	
Purchased in England			(2) 3,500				3,500	
Net Profit					1,664			1,664
	£19,600	£19,600	£7,500	£7,500	£6,500	£6,500	£14,764	£14,764

Fig. 106

The closing entries on the London books are:

(1)

Profit and Loss	£4,836	
Goods from Home Office		£2,000
Expenses		336
Purchases		2,500
To close.		

(2)

Sales	£6,500	
Profit and Loss		£6,500
To close.		

(3)

Profit and Loss	£1,664	
Home Office		£1,664
To close.		

The post-closing trial balance and the statement of profit and loss of the London branch follow:

International Corporation—London Branch

POST-CLOSING TRIAL BALANCE

as at April 30, 19—

Cash	£ 2,764	
Furniture and Fixtures	400	
Home Office Account		£ 8,764
Creditors		6,000
Customers	4,100	
Inventories:		
Goods from Home Office	4,000	
Purchased in England	3,500	
	£14,764	£14,764

Fig. 107

International Corporation—London Branch

STATEMENT OF PROFIT AND LOSS

Month Ended April 30, 19—

Sales			£6,500
Less *Cost of Sales:*			
Goods from Home Office	£6,000		
Deduct Closing Inventory	4,000	£2,000	
Goods Purchased	£6,000		
Deduct Closing Inventory	3,500	2,500	4,500
Gross Profit			£2,000
Less *Expenses*			336
Net Profit			£1,664

Fig. 108

On the basis of these statements, it is necessary for the New York office to make such entries on its books as will reflect the results achieved by the London branch. Various alternatives exist in this respect. Thus, the New York office may:

1. Make an entry to take up the branch profit after having converted it into dollars at, say, the rate of exchange in effect on April 30. This plan makes no allowance for profits and losses arising from exchange fluctuations.

2. Convert the preclosing trial balance of the branch into dollars, ascertain the branch results on the basis of these converted figures, then make an entry on the home office books to reflect these results. Under this plan the result of profits and losses arising out of exchange fluctuations, as well as the profit or loss arising from the branch transactions, may be incorporated on the home office books, if thought desirable.

a) If only the branch operating profit is desired, it is satisfactory to convert all items on the branch trial balance at the exchange rate in effect on the closing date (including branch closing inventory).

b) If it is desired to ascertain profits and losses arising out of fluctuations in foreign exchange, as well as the branch operating profit, it is necessary to convert the various items on the branch trial balance at such rates as will most accurately reflect such profits and losses.

To ascertain branch *operating profit*, the items on the branch trial balance which are used to determine branch net profit (also the branch closing inventory) should be converted at the same rate as in (*a*) above.

To ascertain profit or loss arising out of exchange fluctuations, it is necessary to convert the items which are used to determine branch net profit at other than the rate of exchange in effect on the closing date, hence a separate computation must be made.

Difference of opinion exists among accountants as to the proper rates to apply to reflect the results of exchange fluctuations. Following is a digest of a memorandum on this subject issued in 1931 by the committee on accounting procedure of the American Institute of Accountants:

Balance Sheet Items

1. Fixed assets should be converted into dollars at the rates prevailing when such assets were acquired or constructed.

2. Cash, accounts receivable, and other miscellaneous current assets should be converted at the rate of exchange prevailing on the date of the balance sheet, unless protected by forward exchange contracts.

3. Current liabilities payable in foreign currency should be converted into dollars at the rate of exchange in force on the date of the balance sheet.

4. Long-term liabilities should be converted at the rate of exchange prevailing when the debts were contracted.

PROFIT AND LOSS ITEMS

1. Operating statements should be converted preferably at the average rate of exchange applicable to the accounting period. If there have been wide fluctuations in exchange, the conversion should be made on an average rate applicable to each month, or, if this is too burdensome, on a weighted average.

Before being converted into United States denominations, the adjustments for the closing inventories should be made, because the average rate is used to convert inventories on hand at the closing date.

Adjusting the London trial balance for the closing inventories, and applying these rules as indicated in (*b*) above, the conversion of the London branch trial balance is accomplished as follows:

WORKING PAPERS
To Convert London Office Trial Balance
April 30, 19—

	Trial Balance (Pounds)		Conversion Rate	Trial Balance (Dollars)	
Furniture and Fixtures	400		4.89	1,956.00	
Cash	2,764		5.21	14,400.44	
Home Office		7,100	None		35,948.00
Goods from Home Office	2,000		4.99	9,980.00	
Expenses	336		4.99	1,676.64	
Purchases	2,500		4.99	12,475.00	
Creditors		6,000	5.21		31,260.00
Customers	4,100		5.21	21,361.00	
Sales		6,500	4.99		32,435.00
Inventories:					
Goods from Home Office	4,000		5.21	20,840.00	
Purchased in England	3,500		5.21	18,235.00	
Profit on Exchange					1,281.08
	19,600	19,600		100,924.08	100,924.08

Fig. 109

The exchange rates used are: (1) current rate, 5.21, (2) average rate for month, 4.99, (3) rate at date furniture and fixtures were bought, 4.89.

The item, *Profit on Exchange*, $1,281.08, is not an operating profit, but simply the favorable showing resulting from fluctuations in exchange rates. It is the writer's opinion that no entry need be made on the home office books to reflect the results of such exchange fluctuations. The item is in the nature of an unearned profit or loss.

Next, to ascertain branch profit or loss, all items in the branch trial balance should be converted at the current rate, which should give the same figure for net profit or loss as if the branch closed its own books and then converted its net result into dollars at the current exchange rate.

WORKING PAPERS

To Convert London Office Trial Balance

April 30, 19—

	Trial Balance (Pounds)		Conversion Rate	Trial Balance (Dollars)	
Furniture and Fixtures	400		5.21	2,084.00	
Cash	2,764		5.21	14,400.44	
Home Office		7,100	5.21		36,991.00
Goods from Home Office	2,000		5.21	10,420.00	
Expenses	336		5.21	1,750.56	
Purchases	2,500		5.21	13,025.00	
Creditors		6,000	5.21		31,260.00
Customers	4,100		5.21	21,361.00	
Sales		6,500	5.21		33,865.00
Inventories:					
Goods from Home Office	4,000		5.21	20,840.00	
Purchased in England	3,500		5.21	18,235.00	
	19,600	19,600		102,116.00	102,116.00

Fig. 110

If the profit arrived at when the London branch closes its books, as shown in Fig. 108, is converted at 5.21, the result is also $8,669.44.

Note that the balance of $36,991.00 in the Home Office account is $1,043.00 in excess of the balance in the London branch account. In consolidating home office and branch balance sheets it is necessary to adjust for this difference by the following entry on the consolidating working papers.

Home Office	1,043.00	
Reserve for Exchange Fluctuations		1,043.00
To eliminate difference arising from differences between current rate, at which all items in branch trial balance are converted, and actual rate of transfers.		

Chapter 16

STATEMENT OF AFFAIRS

Fiduciary Accounting. A fiduciary is one who occupies a position involving a high degree of trust. Examples are: administrators, executors, referees, and trustees. A distinguishing characteristic of fiduciaries is that they frequently owe their credentials to some court which exercises supervision over their proceedings. This is not always the case, however, as trustees sometimes act in accordance with the provisions of a contract entered into with the person who creates the trust.

The following subjects will be considered as suitable subdivisions of the general subject of fiduciary accounting: (1) statement of affairs and receivership and reorganization (this chapter), (2) receivership and liquidation.

Strictly speaking, the statement of affairs is not a subdivision of fiduciary accounting. It may be employed, however, to assist in determining a course of action when the possibility of a receivership or a composition is being considered, hence is treated here as the preliminary chapter on the general subject of fiduciary accounting.

Status of Creditors. The status of the creditors of a concern is determined by various factors, such as: (1) specific liens which they hold, (2) equity of the proprietors in the business, (3) earnings of the business, (4) stability of earnings, (5) success with which the business can be sold or liquidated in case it proves unprofitable.

The conflicting equities of stockholders and creditors may not give rise to difficulties when the former are receiving their dividends and the latter are receiving their interest, or are being paid off in accordance with contract or custom. When, however, the situation becomes less favorable, and creditors become concerned over their interests, the rights of the respective parties frequently become the subject matter of legal controversy.

Naturally, in case of liquidation, creditors must be paid before stockholders can expect any satisfaction of their claims. In practice, however, creditors sometimes find that the controlling interests in a corporation have materially weakened its financial standing, through dividend distributions or otherwise, without apprising the creditors of their proceedings.

To the extent that stockholders of an embarrassed enterprise are able to extract funds from it before the creditors take action, to that extent the standing of the creditors, or at least that of the unsecured creditors, is weakened. It is only natural, in such instances, for creditors to take action to protect their interests.

Whenever doubt arises as to the ability of a concern to continue operations, the various parties who possess some form of equity in its assets desire to know how they would fare were the concern liquidated. With this information available, they are in a position to decide upon the best procedure, i.e., whether to (1) liquidate the concern, making such distributions as the sale of assets makes possible, or (2) decide upon some plan of reorganization, by scaling down fixed obligations and perhaps eliminating the equity of the old common stock.

Certain enterprises which are essential to society should not be permitted to liquidate. In such cases the court which takes charge insists upon whatever sacrifices, on the part of the stockholders and creditors, may be necessary to put the concern on a satisfactory operating basis.

Order of Satisfaction of Equities. When the desirability of liquidating a business is under consideration, the order in which the various creditors' and stockholders' equities are to be paid is a matter of importance. The solution lies in the interpretation of the various contracts which the stockholders and creditors have entered into with the enterprise in question. In this regard creditors possess: (1) prior liens, or (2) junior liens, or (3) no liens, in which event they are termed unsecured creditors. (4) There are also possible preferred debts which, because of their legal status, may precede even the prior liens of secured creditors.

The rights of stockholders, both common and preferred, are subordinate to those of creditors. This means that the stockholders

can expect to receive nothing in the nature of a liquidating dividend until all creditors have been paid in full.

In practice, this usually means that the stockholders receive nothing where liquidation is enforced by the creditors. The creditors usually are unable to take action until the corporation is insolvent, i e., possesses assets insufficient to pay its debts. The further shrinkage in values which accompanies liquidation usually means a considerable deficiency to one or more groups of creditors, and hence a total loss of equity to all classes of stockholders.

Where liquidation is voluntary the situation is different. Voluntary liquidation may be undertaken by a wholly solvent enterprise, in which case the stockholders may be in a position to share in the liquidating dividends.

For the purpose of setting forth the status of each group possessing an equity in an enterprise whose liquidation is being considered, a *statement of affairs* is set up. This is sometimes accompanied by a *deficiency account* which summarizes the estimated shrinkages in value which would result if liquidation is carried out, and also shows how such shrinkages would be absorbed in the form of cancelled or reduced equities.

Character and Use of Statement of Affairs. A statement of affairs is based on (*a*) book values and on (*b*) the amounts at which it is estimated that such book values will be realized. Such a statement is necessarily inaccurate because: (1) it is based on estimates of the amount which the assets will realize, and (2) because it does not ordinarily make allowance for the expenses of liquidation.

Assuming that the estimates upon which the statement of affairs is based are reasonably accurate, it is a statement upon which the influential parties must base their decisions as to future action.

In case of voluntary liquidation the voting stockholders are in a position to decide. If they decide to liquidate they must, of course, pay off all creditors in accordance with their contracts or in accordance with such arrangements as can be made. If preferred stockholders possess a preference as to assets, they too must be paid off before the common stockholders receive any liquidating dividend.

In case of involuntary liquidation the creditors are in a position to decide what is best to do, subject, of course, to the orders of the court which has supervision. Based upon the prospects in case of (*a*) liquidation, or (*b*) continuation, they decide which procedure is to their best interest.

In case liquidation is chosen, the affairs of the business are wound up as rapidly as is consistent with the best interests of those concerned. This is sometimes a tedious process requiring years for final consummation.

In case continuation of the business is decided upon, it is necessary to appoint a receiver who supervises the operation of the business while a reorganization committee works out plans under which the business is to be permanently continued.

Form of Statement of Affairs. In the United States there is no law which prescribes the use of the statement of affairs and it is not officially recognized by the courts, consequently its form should be arranged to show the desired information in the best manner.

In such a statement the primary basis of classification is the equity possessed by the creditors and stockholders in the assets. All facts must be arranged to show these equities in the order of priority and the sums estimated to be available to pay them.

Having arranged the equities in order of preference, it is necessary to classify the assets in the order in which they are available. Assets upon which creditors of a given group possess a specific lien should be shown in proper relationship to such lien, thus: (1) If the lien is fully secured it should be shown deducted from the asset, so that the balance available for other debts may be carried out. (2) If the lien is not fully secured, the realizable value of the asset upon which it is secured should be deducted from the lien, so that the remainder of the equity can be carried out as an unsecured debt.

Illustrations. The following illustrations cover two cases, viz., (*a*) where the company has become embarrassed and (*b*) where the company is not insolvent but the stockholders are considering the advisability of liquidation.

Case 1. The West Corporation, engaged in the hardware business, is unable to pay its fixed interest charges on bonds outstanding. The bondholders have appointed a committee to make an investigation

The following trial balance is taken from the ledger as at December 31, 19—:

Cash	43,840.75	
Accounts Receivable	200,037.93	
Notes Receivable	9,400.00	
Goodwill	80,000.00	
Inventory	76,230.00	
Plant and Machinery	34,720.00	
Furniture and Fixtures	8,741.00	
Land	2,500.00	
Deficit	183,910.41	
Creditors		141,380.09
Notes Payable		46,000.00
Bonds—1st Mortgage on Plant		100,000.00
Common Stock		200,000.00
Preferred Stock		150,000.00
Accrued Wages		2,000.00
	639,380.09	639,380.09

Fig. 111

The West

STATEMENT OF

December

Assets

Book Value			Expected to Realize
	Assets pledged with fully secured creditors:		
2,000.00	*Furniture and Fixtures*	1,500.00	
	Deduct fully secured note per contra	1,000.00	500.00
	Assets pledged with partly secured creditors:		
34,720.00	*Plant and Machinery, deducted contra, being security for 100,000 bonds payable*	12,820.00	
	Free assets		
43,840.75	*Cash (Difference in Bank Reconciliation)*		36,376.21
200,037.93	*Accounts Receivable*		
	Good	103,624.76	103,624.76
	Bad	96,413.17	
		200,037.93	
80,000.00	*Goodwill*	80,000.00	
76,230.00	*Inventory*		67,492.00
6,741.00	*Furniture and Fixtures*		4,241.00
2,500.00	*Land*		1,500.00
9,400.00	*Notes Receivable*		2,080.00
183,910.41	*Deficit*		
	Total Free Assets		215,813.97
	Deficiency to Creditors		59,746.12
639,380.09			275,560.09

Fig.

and recommend a course of action. In the meantime application is made for a receiver who is to take charge of the business pending the decision of the committee.

An examination discloses the following facts. The common and preferred stock issues have been fully paid. A correct bank reconciliation discloses that the cash amounts to only $36,376.21. The amount shown in the trial balance is therefore erroneous. The accounts receivable include accounts of stockholders, directors, officers, and employees; $27,330.00 are barred under the statute of limitations, and of the balance 40 per cent are worthless.

It is estimated that in case liquidation is carried out the following shrinkages will occur: Inventory, $8,738.00; plant and machinery, $21,900.00; land, $1,000.00; furniture and fixtures, $3,000.00; notes receivable, $7,320.00.

Corporation

AFFAIRS

31, 19—

Liabilities

Book Value			Expected to Rank
	Preferred liabilities:		
2,000.00	*Wages* . . .		*2,000.00*
	Fully secured liabilities:		
1,000.00	*Notes Payable, deducted per contra*		
	Partially secured liabilities:		
100,000.00	*First Mortgage Bonds* . . .	*100,000.00*	
	Less realizable value of plant and machinery . . .	*12,820.00*	*87,180.00*
	Unsecured liabilities:		
45,000.00	*Notes Payable* . . .		*45,000.00*
141,380.09	*Creditors* . . .		*141,380.09*
	Net Worth		
200,000.00	*Common Stock*		
150,000.00	*Preferred Stock*		
639,380.09			*275,560.09*

Furniture and fixtures, having a book value of $2,000.00 and a realizable value of $1,500.00, are specifically pledged to secure a note payable of $1,000.00.

Required: (1) A statement of affairs showing what the creditors may expect to realize if the business is liquidated, and (2) a deficiency showing the estimated losses and the distribution of the total of such estimated losses.

The West Corporation

DEFICIENCY ACCOUNT

December 31, 19—

Estimated Losses on:		*Loss to Stockholders:*	
Furniture and Fixtures	3,000.00	*Common*	200,000.00
Plant and Machinery	21,900.00	*Preferred*	150,000.00
Land	1,000.00	*Loss to Unsecured Creditors*	59,746.12
Notes Receivable	7,320.00		
Cash	7,464.54		
Accounts Receivable	96,413.17		
Goodwill	80,000.00		
Inventory	8,738.00		
Deficit	183,910.41		
	409,746.12		409,746.12

Fig. 113

In this instance the unsecured creditors will receive $186,380.09 −$59,746.12 = $126,633.97. This amounts to 67.9 cents on the dollar. The stockholders will, of course, receive nothing.

The foregoing statements make no allowance for liquidation expenses, which are sometimes considerable. Also, the losses are simply estimated, and in actual liquidation are certain to vary from the estimates.

On the basis of this showing the creditors must decide whether to liquidate the enterprise or try to place it on an operating basis. If they decide to continue operations they will become the owners, accepting capital stock in a corporation newly organized to take over the business by way of the liquidation of their claims against the old corporation.

If they decide to liquidate they will apply to the proper court for a receiver who will take charge of the procedure and pay the debts as conditions warrant.

In case it is decided to continue the business it may be necessary to rehabilitate the enterprise. In this event the receiver, when he has made all required adjustments, turns its management over to the owners.

If the concern has committed an act of bankruptcy, as this is defined in the national bankruptcy act, the distribution must be made in accordance with the provisions of that law. This is given detailed consideration in Chapter 17.

Case 2. The Lipton Company is an established concern engaged in the retail business. Owing to reduced profits during the past two years the advisability of liquidation is under consideration. A special meeting of stockholders is held and at this meeting it is decided to employ an accountant to prepare statements, based on conservative estimates of the realizable values of assets, setting out what the stockholders might expect to realize after paying all debts.

It is well known that, in case of forced liquidation, the assets of an enterprise usually are much less than their book values. In this instance, however, somewhat unusual opportunities exist for the sale of the company's assets, so that the stockholders anticipate a satisfactory settlement of their equities.

The trial balance as at December 31, 19—, after closing, is as follows:

Cash	4,000.00	
Accounts Receivable	16,000.00	
Merchandise	24,000.00	
Plant and Sundry Assets	18,000.00	
Capital Stock		50,000.00
Surplus		2,000.00
Accounts Payable		10,000.00
	62,000.00	62,000.00

Fig. 114

It is estimated that 90 per cent of the accounts receivable are collectible, that merchandise can be sold for $1,000.00 in excess of its book value, and that plant and sundry assets will realize $17,000.00.

The statements which follow illustrate certain variations from those in Case 1 above.

Interested persons sometimes prefer to use a balance sheet in reaching similar results, simply noting thereon what may be expected in case the assets are liquidated. Circumstances must determine whether such informal methods are best, or whether a formal statement of affairs, based on a different classification of items, is preferable.

The Lipton Company

STATEMENT OF AFFAIRS

December 31, 19—

Book Value	*Assets*	Expected to Realize	Book Value	*Liabilities*	Expected to Rank
	Free Assets			*Unsecured Liabilities*	
4,000.00	*Cash*	*4,000.00*	*10,000.00*	*Accounts Payable*	*10,000.00*
16,000.00	*Accounts Receivable*	*14,400.00*		*Net Worth*	
24,000.00	*Merchandise*	*25,000.00*	*50,000.00*	*Capital Stock*	*50,000.00*
18,000.00	*Plant and Sundry Assets*	*17,000.00*	*2,000.00*	*Surplus*	*400.00*
62,000.00		*60,400.00*	*62,000.00*		*60,400.00*

Fig. 115

The Lipton Company

DEFICIENCY ACCOUNT

December 31, 19—

Estimated Losses:		*Estimated Gains:*	
Accounts Receivable	*1,600.00*	*Merchandise*	*1,000.00*
Plant and Sundry Assets	*1,000.00*	*Loss to Stockholders*	*1,600.00*
	2,600.00		*2,600.00*

Fig. 116

RECEIVERSHIP AND REORGANIZATION

Nature of Receivership. The principal purpose of receivership is to effect the preservation of property pending its ultimate disposition. Receivers are appointed by courts of equity; but by statute many states have extended the remedial action of receivership to subjects lying beyond the original jurisdiction of equity. This extension of the scope of receivership applies particularly to insolvent corporations.

During the past sixty years, which mark the rise of industrialism in the United States, the administration of receiverships has become one of the most important functions of courts of equity. Receivership is sometimes the only solution when large corporations are faced with financial collapse.

The principal legal considerations affecting receivers are summarized as follows:

1. An equity receiver obtains his power from the court, not from the parties at whose instance he is appointed. "He acts in behalf of no particular interest, but guards the rights of all. Being a mere holder, his appointment does not change the title to the property in his charge, nor alter any lien or contract" (*Pennsylvania Steel Co.* v. *N. Y. City R. Co.*, 198 Fed. 721). However, as to qualified title, see item 7, below.

2. Where a receiver has been appointed by a state court in the domicile of the corporation, the court of another state in which corporate property is located, may, when necessary, appoint an ancillary receiver.

3. In conflicts between state and federal courts as to jurisdiction, the principle that the court first acquiring jurisdiction retains it generally decides the question, in the absence of fraud or collusion (Thompson on *Corporations*, 3d ed., Sec. 6283).

4. As to receivers, a well-recognized distinction exists between (*a*) passive receivers who merely preserve the property, collect the assets, and report the fund to the court for distribution, and (*b*) active receivers, to whom are given the management of going concerns. The latter possess powers necessarily much broader than those possessed by the former.

5. As to grounds for appointment of receivers, the following principles apply: (*a*) Prevention of loss before the property or thing in controversy can be disposed of by a final decree on the merits justifies appointment of a receiver. (*b*) Mere insolvency does not justify a receivership unless there is evidence of waste, fraud, etc. (*c*) Mere misconduct, in the absence of fraud, is not sufficient cause for a receivership. (*d*) Judgment or lien creditors may maintain action for a receiver; not simple creditors who have not exhausted their legal remedies.

6. Property in the hands of a receiver is not subject to levy under attachment, execution, or judicial process. To do so is in contempt of court.

7. The receiver takes a qualified title to all property of the corporation within the court's jurisdiction; he also has the right of possession of such property, as far as the purposes of the receivership require.

Accounting Considerations. There is no prescribed plan or method of accounting which a receiver is required to follow. Different plans have been devised with a view to one or both of two ends, viz.: (1) the meeting of special requirements peculiar to the property in question; (2) the emphasizing of some aspect of the receiver's status. Generalizations regarding the first point are not required; the solution must be devised in view of the circumstances.

As regards the status of the receiver, several plans are available:

1. The receiver's qualified title may be emphasized by opening an account showing the receiver's responsibility for the *net* assets, i.e., the excess of assets over liabilities. The account is entitled *Receiver's Equity*. This plan treats the estate as being the assets less the claims.

2. If desired to emphasize the receiver's responsibility for the *gross* assets, only the assets of the estate are entered on the receiver's books. The claims are kept in a separate record. The receiver's books are made self-balancing by opening an account with the receiver entitled, *George Ellis, Receiver*. This plan treats the estate as the total assets, without regard to the claims.

3. The third plan of accounting makes the receiver the custodian of both stockholders and creditors. This plan requires that the equities of both stockholders and bondholders be shown. No account is opened with the receiver; instead, creditors are classified and listed as approved and unapproved, while the capital stock and surplus or deficit accounts are retained until closed out against shrinkages and liquidation dividends, or are revised through some plan of reorganization.

4. No changes are made in the books, the capital stock accounts and surplus or deficit being allowed to stand until a later date, when reorganization or liquidation is decided upon. This plan is preferable when reorganization is in prospect.

Routine Procedure. The routine accounting procedure in case of a receivership having reorganization as its end does not differ from the accounting procedure of a solvent going concern. The receiver carries on the usual operations while effecting such changes in the capital structure as are necessary to enable him to end the receivership. Although the receiver may open a new general ledger so as to give effect to the changes in certain accounts resulting from the receivership, this may be avoided by making certain adjustments on the old books to bring the account setup into conformity with one or other of the plans described above.

Sometimes, when a receiver takes charge, he finds the records in such condition as to render necessary the installation of a satisfactory accounting system.

In any event, it is the receiver's duty to take an inventory and appraisal of all assets taken over. The results of this appraisal will enable him to ascertain to what extent the books are to be adjusted, or whether they should be abandoned altogether and new books opened.

When a receiver is appointed he may not know whether reorganization or liquidation will be the final outcome, because he does not know whether he can put the business on a profitable basis, such as will satisfy its creditors. The decision in this matter rests with the court, which bases its determination on the reports which the receiver submits to it.

If liquidation is the outcome, the receiver will probably be compelled to dispose of some of the assets for sums far below their book values. Consequently, the situation should be carefully studied to determine what is likely to be the outcome, and the value of the assets fixed accordingly. If reorganization is likely, the assets may be carried at their book value, subject to such adjustment thereof as may be necessary when the capital structure of the reorganized concern is determined.

In the event, however, that book values are clearly out of line with going concern values—values such as might serve as a satisfactory basis for profitable operations in the future—the receiver is justified in revising them at once.

Receiver's Use of Statement of Affairs. The beginning of the receivership marks the end of operations under one management

and the commencement of operations under the receiver's management. For that reason the books should be closed, a profit and loss statement set up for the period thus closed, and a balance sheet prepared as at the closing date.

Employing the book values shown in this balance sheet, the receiver may find it desirable to set up a statement of affairs showing what creditors might expect by way of satisfaction of their claims were liquidation decided upon.

However, such formal statements are probably not worth the cost of their compilation where liquidation is a foregone conclusion. In such cases the receiver proceeds at once with the sale of the assets, and a statement of affairs would be of little value. For detailed consideration of the statement of affairs, its form and content, see page 273.

Receivership and Reorganization Illustrated. The Brenner-Jones Corporation, which was organized about ten years ago to manufacture household utilities, has shown consistent losses for the last three years. As a consequence its working capital has been reduced to a point where it is no longer able to meet interest charges on its bonded debt. The interest payment of $3,000.00 on the $100,000.00 of outstanding bonds was passed on January 1 of the current year.

Being lien creditors, the bondholders appoint a committee composed of several of their own number who, after consideration of the situation, apply to the proper court requesting the appointment of a receiver. A lawyer is employed to prepare the petition for a rceeiver. Therein he states the reasons why a receiver should be appointed, namely, to conserve the property until a proper course of action can be determined. If, after considering the petition, the court decides that the reasons set forth in it are valid, it appoints a receiver and instructs him to take charge of the corporation.

The receiver acts under the court's orders and subject to its supervision. He reports to the court whenever necessary to enable the court to exercise its judgment as to policies to be followed in the rehabilitation or liquidation of the business.

The receiver takes over the business on April 15 and proceeds to close the books for the period January 1–April 15, inclusive. He

instructs the bookkeeper to bring all transactions upon the books, foot and post all books of original entry, and prepare a trial balance of the general ledger, which is as follows:

The Brenner-Jones Corporation

TRIAL BALANCE

April 15, 19—

Cash in Bank	13.00	
Accounts Receivable	97,400.00	
Accounts Payable		145,000.00
Bonds, 6 per Cent First Mortgage		100,000.00
Plant and Equipment	212,000.00	
Raw Materials, Jan. 1	53,000.00	
Goods in Process, Jan. 1	27,400.00	
Finished Goods, Jan. 1	34,000.00	
Furniture and Fixtures	3,000.00	
Capital Stock		200,000.00
Reserve for Bad Debts		10,000.00
Reserve for Depreciation—Plant and Equipment		30,000.00
Accrued Bond Interest		3,000.00
Purchases, Raw Materials	68,000.00	
Sales		88,000.00
Factory Labor	12,000.00	
Selling Expenses	15,000.00	
Notes Payable		28,000.00
General and Administrative Expense	6,700.00	
Goodwill	50,000.00	
Deficit	25,487.00	
	604,000.00	604,000.00

Fig. 117

1. The inventories at April 15 are:

Raw Materials	48,000.00
Goods in Process	23,600.00
Finished Goods	38,000.00

To permit the proper closing of the books, adjustments should be made for the following:

2. Depreciation on plant and equipment, January 1–April 15, \$4,940.00.

3. Depreciation on furniture and fixtures \$8.75.

4. Interest accrued on bonds, $3\frac{1}{2}$ months, \$1,750.00.

The working papers, reflecting the necessary adjustments and showing operating results and balance sheet, follow:

The Brenner-Jones Corporation
Working Papers
Period Jan. 1–Apr. 15, 19—

	Trial Balance April 15, 19—		Adjustments		Cost of Goods Sold		Profit and Loss		Balance Sheet	
Cash in Bank	13.00								13.00	
Accounts Receivable	97,400.00								97,400.00	
Accounts Payable		145,000.00								145,000.00
Bonds, 6 per Cent First Mortgage		100,000.00								100,000.00
Plant and Equipment	212,000.00								212,000.00	
Raw Materials, Jan. 1	53,000.00			(1) 48,000.00	53,000.00	48,000.00				
Goods in Process, Jan. 1	27,400.00			(1) 23,600.00	27,400.00	23,600.00				
Finished Goods, Jan. 1	34,000.00			(1) 38,000.00	34,000.00	38,000.00				
Furniture and Fixtures	3,000.00								3,000.00	
Capital Stock		200,000.00								200,000.00
Reserve for Bad Debts		10,000.00		(5) 2,000.00						12,000.00
Reserve Depreciation—Plant and Equipment		30,000.00		(2) 4,940.00						34,940.00
Accrued Bond Interest		3,000.00		(4) 1,750.00						4,750.00
Purchases, Raw Materials	68,000.00				68,000.00					
Sales		88,000.00						88,000.00		
Factory Labor	12,000.00				12,000.00		15,000.00			
Selling Expenses	15,000.00									28,000.00
Notes Payable		28,000.00					6,700.00			

Fig. 118.—*Continued on Facing Page.*

General and Administrative Expense	6,700.00									
Goodwill	50,000.00								50,000.00	
Deficit	25,487.00								25,487.00	
Raw Materials, April 15			(1) 48,000.00						48,000.00	
Goods in Process, April 15			(1) 23,600.00						23,600.00	
Finished Goods, April 15			(1) 38,000.00						38,000.00	
Depreciation—Plant and Equipment			(2) 4,940.00		4,940.00					
Depreciation—Furniture and Fixtures			(3) 8.75				8.75			8.75
Reserve Depreciation—Furniture and Fixtures				(3) 8.75			1,750.00			
Interest Expense			(4) 1,750.00				2,000.00			
Bad Debts			(5) 2,000.00				89,740.00			
Cost of Goods Sold						89,740.00				
Net Loss								27,198.75	27,198.75	
	604,000.00	604,000.00	118,298.75	118,298.75	199,340.00	199,340.00	115,198.75	115,198.75	524,698.75	524,698.75

Fig. 118

Financial Statements. Below are (a) the statement of profit and loss and schedule of cost of goods sold for the period January 1–April 15, 19—, and (*b*) the balance sheet of the Brenner-Jones Corporation as at April 15, 19—.

Brenner-Jones Corporation

STATEMENT OF PROFIT AND LOSS

For Period Jan. 1–April 15, 19—

Sales		88,000.00
Less Cost of Goods Sold (Schedule 1)		89,740.00
Gross Profit (Deficit)		7,740.00
Selling, General and Administrative Expenses:		
Selling Expenses	15,000.00	
General and Administration Expense	6,700.00	
Depreciation	8.75	
Bad Debts	2,000.00	23,708.75
Operating Loss		25,448.75
Interest Expense		1,750.00
Net Loss Period Jan. 1–April 15, 19—		27,198.75

Fig. 119

SCHEDULE I

Brenner-Jones Corporation

STATEMENT OF COST OF GOODS SOLD

For Period Jan. 1–April 15, 19—

Materials Put into Process:		
Purchases—Raw Materials	68,000.00	
Add Decrease in Raw Materials Inventory	5,000.00	73,000.00
Manufacturing Costs:		
Labor	12,000.00	
Depreciation	4,940.00	16,940.00
Cost of Goods Put into Process		89,940.00
Decrease in Goods in Process Inventory	3,800.00	
Increase in Finished Goods Inventory	4,000.00	200.00
		89,740.00

Fig. 120

Statement of Affairs. The showing for the 3½ months ended April 15 is so poor that the receiver believes it unwise to proceed in an effort to rehabilitate the enterprise without first presenting to the creditors a statement showing what they might expect to realize were the business liquidated. For this purpose he prepares a statement of affairs, based on what it is estimated the assets will realize. See Fig. 122.

Brenner-Jones Corporation

BALANCE SHEET

as at April 15, 19—

Assets

Current:			
Cash		$ 13.00	
Accounts Receivable	$ 97,400.00		
Less Reserve for Bad Debts	12,000.00	85,400.00	
Inventories:			
Raw Material	48,000.00		
Goods in Process	23,600.00		
Finished Goods	38,000.00	109,600.00	
			$195,013.00
Fixed:			
Plant and Equipment	212,000.00		
Less Reserve for Depreciation	34,940.00	177,060.00	
Furniture and Fixtures	3,000.00		
Less Reserve for Depreciation	8.75	2,991.25	180,051.25
Goodwill			50,000.00
Deficit			52,685.75
			$477,750.00

Liabilities

Current:		
Vouchers Payable	$145,000.00	
Accrued Bond Interest	4,750.00	
Notes Payable	28,000.00	$177,750.00
Fixed:		
Bonds—6 per Cent		100,000.00
Net Worth:		
Capital Stock		200,000.00
		$477,750.00

Fig. 121

Brenner-Jones Corporation

Statement of Affairs

April 15, 19—

Assets

Book Value			Estimated to Realize
	Assets fully pledged:		
	None		
	Assets partly pledged:		
177,060.00	*Plant and Equipment*	125,000.00	
	Deduct Mortgage and Interest (Contra)	104,750.00	20,250.00
	Assets not pledged:		
13.00	*Cash*		13.00
85,400.00	*Accounts Receivable*		70,000.00
109,600.00	*Inventories*		75,000.00
2,991.25	*Furniture and Fixtures*		1,000.00
50,000.00	*Goodwill*		
52,685.75	*Deficit*		
	Free Assets		166,263.00
	Deficiency to Creditors		6,737.00
477,750.00			173,000.00

Liabilities

Book Value			Estimated to Rank
	Preferred debts:		
	None		
	Fully secured debts:		
100,000.00	*Bonds—6 per Cent, Deducted Contra*		
4,750.00	*Interest Accrued, Deducted Contra*		
	Deduct Contra		
	Partly secured debts:		
	None		
	Unsecured debts:		
145,000.00	*Accounts Payable*	145,000.00	
28,000.00	*Notes Payable*	28,000.00	173,000.00
	Net Worth:		
200,000.00	*Capital Stock*		
477,750.00			173,000.00

Fig. 122

Decision of Creditors. A meeting of the creditors is held at which it is decided to permit the receiver to operate the business until the end of the current year.

It is believed that by reducing the inventories of raw materials and finished goods and by enforcing collection of past due customers' accounts the cash position of the company can be improved.

The profit and loss statement shows that manufacturing costs are ridiculously high. The receiver is instructed to concentrate attention on the buying of raw materials with a view to reducing costs.

It is understood that: (*a*) If the operations for the balance of the year are wholly unsuccessful, the business will be liquidated. (*b*) If the operations for the balance of the year are partially successful, but the company is not placed in a position permitting it to pay interest on its bonds, a plan of recapitalization will be worked out. (*c*) If the operations are wholly successful the present capitalization will remain undisturbed.

In event of (*a*) the procedure is as explained (i.e., liquidate). In event of (*c*) no reorganization is required. In event of (*b*) the procedure is worked out along lines somewhat as follows:

Recapitalization. The results for the year indicate that the possibilities are good if the Brenner-Jones Corporation can be recapitalized to eliminate the fixed interest charge on the bonds and reduce by a material amount the current vouchers payable. It is always difficult to secure an agreement among conflicting interests of stockholders, bondholders, and unsecured creditors. The procedure is for each group to appoint a committee to look after its interests by explaining to the court why a proposed plan of reorganization may be unfair.

In the end the court authorizes the receiver to proceed with a plan which it believes best for all interests under the circumstances. Nonassenting creditors and stockholders ultimately receive such consideration as the corporation may care to accord them.

After due consideration it is determined to proceed as follows, the reorganization to be accomplished as at December 31, 19—.

The accounts payable at December 31 amount to \$166,000.00. These creditors agree to accept preferred stock, \$83,000.00, in settlement of one-half of their claims.

Brenner-Jones Corporation

BALANCE SHEET

as at December 31, 19—

Assets			
Current			
Cash		$ 21,600.00	
Accounts Receivable	$ 93,060.00		
Less Reserve for Bad Debts	13,000.00	80,060.00	
Inventories:			
Raw Material	27,000.00		
Goods in Process	21,300.00		
Finished Goods	16,000.00	64,300.00	$165,960.00
Fixed			
Plant and Equipment	212,000.00		
Less Reserve for Depreciation	37,000.00	175,000.00	
Furniture and Fixtures	3,000.00		
Less Reserve for Depreciation	27.75	2,973.25	177,973.25
Goodwill			50,000.00
Deficit			109,066.75
			$503,000.00

Liabilities		
Current		
Accounts Payable	$166,000.00	
Accrued Bond Interest	9,000.00	
Notes Payable	28,000.00	$203,000.00
Fixed		
Bonds, 6 per Cent		100,000.00
Net Worth		
Capital Stock		200,000.00
		$503,000.00

Fig. 123

Brenner-Jones Corporation

BALANCE SHEET

(After Reorganization)

as at December 31, 19—

Assets			
Current			
Cash		$ 12,600.00	
Accounts Receivable	$ 93,060.00		
Less Reserve for Bad Debts	13,000.00	80,060.00	
Inventories:			
Raw Material	27,000.00		
Goods in Process	21,300.00		
Finished Goods	16,000.00	64,300.00	$156,960.00
Fixed			
Plant and Equipment	212,000.00		
Less Reserve for Depreciation	37,000.00	175,000.00	
Furniture and Fixtures	3,000.00		
Less Reserve for Depreciation	27.75	2,973.25	177,973.25
Deficit			59,066.75
			$394,000.00

Liabilities	
Current	
Accounts Payable	$ 83,000.00
Net Worth	
Common Stock (No Par)	100,000.00
Preferred Stock	211,000.00
	$394,000.00

Fig. 124

The holders of the notes payable agree to accept new 6 per cent preferred stock dollar for dollar in full settlement of their claims.

The common stockholders agree to accept in full settlement of their claims new no-par common stock, share for share, each share of such stock to be given a value of $50.00, as contrasted with the $100.00 par value of the old common stock. The difference is to be adjusted against the Goodwill and Deficit accounts.

The bondholders agree to accept new 6 per cent preferred stock in full settlement of their claims, accrued interest to be paid in cash.

The balance sheet of the Brenner-Jones Corporation at December 31, 19—, before reorganization, is shown in Fig. 123.

The following entries reflect the effects of the reorganization on the books:

Dec. 31, 19—		
Interest Accrued on Bonds	9,000.00	
Accounts Payable	83,000.00	
Notes Payable	28,000.00	
Common Stock (Old)	200,000 00	
Bonds, 6 per Cent	100,000.00	
Common Stock (No Par)		100,000.00
Goodwill		50,000.00
Deficit (Surplus)		50,000.00
Preferred Stock		211,000.00
Cash		9,000.00
To effect reorganization per court order.		

The balance sheet after reorganization is shown in Fig. 124.

The reorganization improves the working capital position of the corporation and removes the fixed interest charge on bonds. Good operating management is thus placed in a position enabling it to proceed with much better prospects of success.

Chapter 17

FIDUCIARY ACCOUNTING

Receivership and Liquidation

Liquidation Explained. By liquidation is meant the termination, or winding up, of a business. This is accomplished by disposing of the assets for cash and paying the funds thus acquired to creditors in the form of one or more liquidating dividends. The proprietors share in the dividends only after the creditors have been paid in full.

Liquidation may require years for its consummation because of the slowness with which some assets can be converted into cash.

Liquidation may be a foregone conclusion at the time the receiver is appointed; or it may be decided upon as the best plan to pursue only after the receiver has unsuccessfully attempted to place the business on a going concern basis.

Accounting Considerations. If a concern is to be liquidated, the receiver's accounts must show such facts as are necessary to enable him to make the reports required by the court, as well as to render a detailed explanation of his stewardship to interested parties.

As in case of a receivership which is followed by reorganization, there are several possibilities as regards the plan of accounting which the receiver may pursue.

He may continue the old books in operation or he may open new books. If he opens new books, he may keep them in two divisions—one for the estate and one for the claims. Or he may bring the claims upon the books only as they are approved. The plan of keeping the accounts in two divisions is perhaps as satisfactory as any, and will be adhered to in the illustration which follows.

These two divisions may consist of two sections of the same ledger, the first section for the estate and the second section for the claims.

One journal may be used as a posting medium for both sections of the ledger, or, if desired, separate journals may be employed.

Status of Assets. The book value of the assets is not of much practical significance when liquidation is in prospect. If the receiver takes the assets on his books at book value he is almost certain to show heavy losses in liquidation. It is therefore to his advantage to show the assets at such figure as it is conservatively estimated they will realize.

However, book values are sometimes used, the receiver starting out with a trial balance drawn from the ledger. In some instances, the condition of the books should be permitted to determine which plan to pursue. If the books have been properly kept there is more reason why the receiver should take over the assets at book value than where they have been kept poorly.

Status of Liabilities. The chief reason for treating liabilities of a liquidating concern separately is that, before being paid, they must be approved by the court. After approval, they are classified as either (*a*) common claims allowed, or (*b*) preferred claims allowed.

A preferred claim is one which, for some reason, the court requires to be paid before others are allowed. All others are common claims.

Since the claims to be presented are not known to the receiver at the commencement of the receivership, there are two alternative plans of procedure, as follows:

1. Enter all known claims on the claims division of the ledger by an entry, as follows:

Estate of Company X in Receivership	———	
Unproved Claims		———
To take up all known claims against the corporation.		

Under this plan, as claims are allowed by the court, the Unproved Claims account is debited and Approved Claims account is credited. Claims must be submitted to the court for approval before this entry is made.

2. Enter claims on the books only as approved. Under this plan the approved claims are entered as follows:

Estate of Company X in Receivership	———	
Preferred Claims Approved		———
Common Claims Approved		———
To bring approved claims upon the books, the charge being to the estate.		

Illustration. The trial balance of the Eastern Lumber Company on December 31, 19—, is as follows:

Cash	2,500.00	
Accounts Receivable	22,300.00	
Inventory	41,100.00	
Unexpired Insurance	300.00	
Land and Timber	572,000.00	
Plant and Equipment	351,000.00	
Capital Stock		400,000.00
Surplus		251,000.00
First Mortgage Bonds, 6 per Cent		200,000.00
Bond Interest Accrued—6 Months		6,000.00
Preferred Claims		36,500.00
Unsecured Creditors		95,700.00
	989,200.00	989,200.00

Fig. 125

The company is unable to meet its current obligations. The Buehler Trust Company is appointed receiver, effective January 1, 19—. The receiver's transactions for 19— are summarized below:

Logs Bought for Cash	4,500.00
Logs Bought on Account	4,000.00
Expenses of Operation	200,100.00
Salaries	15,000.00
Taxes	2,000.00
Selling Expenses	12,000.00
Demurrage	400.00
General Expense	5,100.00

All paid in cash, including accounts payable incurred, $4,000.00, for logs bought on account.

An allowance of $40,000.00 was made for depletion of stumpage cut, this amount being credited to Land and Timber account.

Interest was paid in full on bonds to December 31, 19—.

Outstanding bonds were reduced to $185,000.00 on December 31, 19—, by paying off $15,000.00 at par.

Gross sales for year, $470,000.00, of which $400,000.00 has been received in cash in settlement of account.

The accounts receivable at December 31, 19—, realized $21,000.00 net.

Yearly depreciation of $15,000.00 was allowed on plant and equipment.

Unexpired insurance on December 31, 19—, amounted to $150.00. Inventory was $35,000.00.

Required: (*a*) opening journal entries on receiver's books; (*b*) journal entries for all transactions; (*c*) realization and liquidation account; (*d*) profit and loss account.

Assuming that separate records are to be kept for assets and claims, the entry on the journal for the assets is:

Jan. 1, 19—		
Cash	*2,500.00*	
Accounts Receivable	*22,300.00*	
Inventory	*41,100.00*	
Unexpired Insurance	*300.00*	
Land and Timber	*572,000.00*	
Plant and Equipment	*351,000.00*	
Estate of Eastern Lumber Company in Receivership		*989,200.00*
To open asset accounts on receiver's books.		

The liabilities are brought upon the books by a journal entry, as follows:

Jan. 1, 19—		
Estate of Eastern Lumber Co. in Receivership	*338,200.00*	
Unproved Claims		*338,200.00*
To record debts of Eastern Lumber Co. at beginning of receivership as follows:		
First Mortgage Bonds (6 per cent)	*200,000.00*	
Bond Interest Accrued	*6,000.00*	
Preferred Claims	*36,500.00*	
Unsecured Creditors	*95,700.00*	

A distinction between liabilities existing at the time the receiver takes charge and those incurred by the receiver is of importance. To emphasize this distinction, all liabilities incurred by the receiver will be recorded in the asset division of the ledger. Such debts must be paid in preference to all others.

The transactions for the year are journalized thus:

(1)

Logs Purchased	*8,500.00*	
Expenses of Operation	*200,100.00*	
Salaries	*15,000.00*	
Taxes	*2,000.00*	
Selling Expenses	*12,000.00*	
Demurrage	*400.00*	
General Expense	*5,100.00*	
Cash		*243,100.00*
Year's Expenditures.		

(2)

Depletion	*40,000.00*	
Land and Timber		*40,000.00*
Allowance for depletion.		

(3)		
Unproved Claims	6,000.00	
Common Claims Approved		6,000.00
Interest accrued and unpaid at December 31, 19—.		
(4)		
Unproved Claims	15,000.00	
Common Claims Approved		15,000.00
Bonds approved for redemption.		
(5)		
Unproved Claims	36,500.00	
Preferred Claims Approved		36,500.00
Preferred claims approved.		
(6)		
Common Claims Approved	21,000.00	
Preferred Claims Approved	36,500.00	
Cash		57,500.00
Payment of claims approved.		
(7)		
Interest Expense	12,000.00	
Cash		12,000.00
Current interest on bonds.		
(8)		
Cash	400,000.00	
Accounts Receivable	70,000.00	
Sales		470,000.00
Soles for year.		
(9)		
Cash	21,000.00	
Loss on Liquidation	1,300.00	
Accounts Receivable (Old)		22,300.00
For accounts realized.		
(10)		
Depreciation Expense	15,000.00	
Reserve for Depreciation		15,000.00
Yearly allowance.		
(11)		
Insurance Expense	150.00	
Unexpired Insurance		150.00
Yearly allowance.		
(12)		
Inventory, Dec. 31, 19—	35,000.00	
Inventory, Dec. 31, 19—		35,000.00
To bring closing inventory on books.		

The receiver's opening trial balance, his transactions for the year, and adjusting and closing entries and balance sheet as at December 31, 19—, are shown on the accompanying working paper. From the data shown on this working paper the receiver prepares such statements as are required by the court, also such reports as he desires to submit to creditors. These reports necessarily vary

Eastern Lumber Company in Receivership

TRANSACTIONS

Year Ended Dec. 31, 19—

			Transactions and Adjustments		Realization Profit and Loss		Operating Profit and Loss		Balance Sheet	
Asset Division:										
Cash	2,500.00		(9) 21,000.00	(7) 12,000.00						
			(8) 400,000.00	(6) 57,500.00						
				(1) 243,100.00					110,900.00	
Accounts Receivable (Old)	22,300.00			(9) 22,300.00						
Inventory, Dec. 31, 19—	41,100.00			(12) 35,000.00			6,100.00			
Unexpired Insurance	300.00			(11) 150.00					150.00	
Land and Timber	572,000.00			(2) 40,000.00					532,000.00	
Plant and Equipment	351,000.00								351,000.00	
Estate—Eastern Lumber Co		651,000.00								651,000.00
Logs Purchased			(1) 8,500.00				8,500.00			
Expenses of Operation			(1) 200,100.00				200,100.00			
Salaries			(1) 15,000.00				15,000.00			
Taxes			(1) 2,000.00				2,000.00			
Selling Expenses			(1) 12,000.00				12,000.00			
Demurrage			(1) 400.00				400.00			
General Expense			(1) 5,100.00				5,100.00			
Depletion			(2) 40,000.00				40,000.00			
Interest Expenses			(7) 12,000.00				12,000.00			
Accounts Receivable (New)			(8) 70,000.00						70,000.00	
Sales				(8) 470,000.00				470,000.00		
Loss on Liquidation			(9) 1,300.00		1,300.00					
Depreciation Expense			(10) 15,000.00				15,000.00			
Reserve for Depreciation				(10) 15,000.00						15,000.00
Insurance Expense			(11) 150.00				150.00			
Inventory, Dec. 31, 19—			(12) 35,000.00						35,000.00	

Estate of Eastern Lumber Co.—Loss on Liquidation.						1,300.00				1,300.00	
Estate of Eastern Lumber Co.—Operating Profit. .							153,650.00				153,650.00
Claims Division:					1,300.00	1,300.00	470,000.00	470,000.00			
Unproved Claims.		338,200.00	(5) 36,500.00								280,700.00
			(4) 15,000.00								
			(3) 6,000.00								
Common Claims Approved.			(6) 21,000.00	(4) 15,000.00							
				(3) 6,000.00							
Preferred Claims Approved			(6) 36,500.00	(5) 36,500.00							
	989,200.00	989,200.00	952,550.00	952,550.00						1,100,350.00	1,100,350.00

Fig. 126

in character with varying circumstances and with the requirements of the court. Essentially, however, the receiver's report should consist of a statement explaining in detail the progress made in the liquidation of the estate, and also, if he is an active receiver, a statement setting forth the results of operations. Other statements, such as one showing cash receipts and disbursements, may be required.

Statements to Court. The following plan of statements to be submitted to the court is suggestive only. It should be altered to meet varying conditions.

Eastern Lumber Company in Receivership

CHARGE AND DISCHARGE STATEMENT

Year Ended Dec. 31, 19—

Receiver Charges Himself with:		
Assets Taken Over:		
Cash	*2,500.00*	
Accounts Receivable (Old)	*22,300.00*	
Inventory, Dec. 31, 19—	*47,100.00*	
Unexpired Insurance	*300.00*	
Land and Timber	*572,000.00*	
Plant and Equipment	*351,000.00*	
Operating Profit:		
Year Ended Dec. 31, 19—	*153,650.00*	*1,142,850.00*
Receiver Credits Himself with:		
Liabilities Assumed:		
Unproved Claims	*338,200.00*	
Loss on Realization		
Accounts Receivable (Old) Uncollectible	*1,300.00*	*339,500.00*
Balance, Estate of Eastern Lumber Company, Dec. 31, 19— (as per Schedule I)		*803,350.00*

Fig. 127

Eastern Lumber Company in Receivership

SCHEDULE I

BALANCE SHEET

December 31, 19—

Cash	$ 110,900.00	Unproved Claims	$ 280,700.00
Unexpired Insurance	150.00	Estate of Eastern Lumber Co., in Receivership	803,350.00
Accounts Receivable (New)	70,000.00	Reserve for Depreciation on Plant and Equipment	15,000.00
Inventory, Dec. 31	35,000.00		
Land and Timber	532,000.00		
Plant and Equipment	351,000.00		
	$1,099,050.00		$1,099,050.00

Fig. 128

Eastern Lumber Company in Receivership

SCHEDULE II

STATEMENT OF PROFIT AND LOSS

Year Ended Dec. 31, 19—

Sales		*470,000.00*
Deduct Expenses:		
Inventory Variation	*6,100.00*	
Logs Purchased	*8,500.00*	
Operating Expenses	*200,100.00*	
Salaries	*15,000.00*	
Taxes	*2,000.00*	
Selling Expenses	*12,000.00*	
Demurrage	*400.00*	
General Expense	*5,100.00*	
Depletion	*40,000.00*	
Interest	*72,000.00*	
Depreciation	*15,000.00*	
Insurance	*150.00*	*316,350.00*
Operating Profit		*753,650.00*
Liquidation Loss		*1,300.00*
Net Increase in the Estate		*752,350.00*

Fig. 129

The foregoing statements constitute an interim report, to be followed by one or more of similar character. The final report is made at the time the receiver completes his work as liquidator of the business.

BANKRUPTCY

Receivers and Trustees in Bankruptcy. A receiver in bankruptcy is one who is appointed in accordance with the provisions of the bankruptcy laws. This kind of receivership usually follows the filing of a voluntary or involuntary petition in bankruptcy under the Federal Bankruptcy Act of 1898, as since amended. The receiver in bankruptcy acts to preserve the estate until the trustee is appointed.

Involuntary Petition in Bankruptcy. In accordance with the provisions of the Federal Bankruptcy Act, an involuntary petition in bankruptcy may be filed if the bankrupt has, within four months prior to the filing of the petition, been guilty of one or more acts designated as acts of bankruptcy, viz.:

a) Conveyed, transferred, concealed, or removed, or permitted to be concealed or removed, any part of his property with intent to hinder, delay or defraud his creditors, or any of them; or

b) Transferred, while insolvent, any portion of his property to one or more of his creditors with intent to prefer such creditors over his other creditors; or

c) Suffered or permitted, while insolvent, any creditor to obtain a preference through legal proceedings, and not having at least five days before a sale or other disposition of any property affected by such preference, vacated or discharged such preference; or

d) Suffered or permitted, while insolvent, any creditor to obtain through legal proceedings any levy, attachment, judgment, or other lien, and not having vacated or discharged the same within thirty days from the date such levy, attachment, judgment, or other lien was obtained; or

e) Made a general assignment for the benefit of his creditors; or while insolvent, a receiver or a trustee has been appointed, or put in charge of his property; or

f) Admitted in writing his inability to pay his debts and his willingness to be adjudged bankrupt on that ground.

Voluntary Petition in Bankruptcy. A voluntary petition in bankruptcy may be filed by any person or company, excepting municipal, railroad, insurance, or banking corporations.

Insolvency Defined. Under the Federal Bankruptcy Act, insolvency is a condition where the total debts of a concern exceed its total assets, taken at a fair valuation.

Referee and Trustee. The Federal Bankruptcy Act provides for both a trustee and a referee as officers required to administer bankrupt estates.

Section 39 describes the duties of the referee as follows:

Referees shall:

1. Declare dividends and prepare and deliver to trustees dividend sheets showing the dividends declared and to whom payable.

2. Examine all schedules of property and lists of creditors filed by bankrupts and cause such as are incomplete or defective to be amended;

3. Furnish such information concerning the estates in process of administration before them as may be requested by the parties in interest.

4. Give notices to creditors as herein provided.

5. Make up records embodying the evidence, or the substance thereof, as agreed upon by the parties in all contested matters arising before them, whenever requested to do so by either of the parties thereto, together with their findings therein, and transmit them to the judges.

6. Prepare and file the schedules of property and lists of creditors required to be filed by the bankrupts, or cause the same to be done, when the bankrupts fail, refuse, or neglect to do so.

7. Safely keep, perfect, and transmit to the clerks the records, herein required to be kept by them, when the cases are concluded.

8. Transmit to the clerks such papers as may be on file before them whenever the same are needed in any proceeding in courts, and in like manner secure the return of such papers after they have been used, or, if it be impracticable to transmit the original papers, transmit certified copies thereof by mail.

9. Upon application of any party in interest, preserve the evidence taken or the substance thereof as agreed upon by the parties before them when a stenographer is not in attendance.

10. Whenever their respective offices are in the same cities or towns where the courts of bankruptcy convene, call upon and receive from the clerks all papers filed in courts of bankruptcy which have been referred to them.

Section 47 describes the duties of the trustee as follows:

Trustees shall respectively:

1. Account for and pay over to the estates under their control all interest received by them upon property of such estates.

2. Collect and reduce to money the property of the estates for which they are trustees, under the direction of the court, and close up the estate as expeditiously as is compatible with the best interests of the parties in interest; and such trustees, as to all property in the custody or coming into the custody of the bankruptcy court, shall be deemed vested with all the rights, remedies, and powers of a creditor holding a lien by legal or equitable proceedings thereon;

and also, as to all property not in the custody of the bankruptcy court shall be deemed vested with all the rights, remedies, and powers of a judgment creditor holding an execution duly returned unsatisfied.

3. Deposit all money received by them in one of the designated depositories.

4. Disburse money only by check or draft on the depositories in which it has been deposited.

5. Furnish such information concerning the estates of which they are trustees and their administration as may be requested by parties in interest.

6. Keep regular accounts showing all amounts received and from what sources and all amounts expended and on what accounts.

7. Lay before the final meeting of the creditors detailed statements of the administration of the estates.

8. Make final reports and file final accounts with the courts fifteen days before the day fixed for the final meeting of the creditors.

9. Pay dividends within ten days after they are declared by the referees.

10. Report to the courts, in writing, the condition of the estates and the amounts of money on hand, and such other details as may be required by the courts, within the first month after their appointment and every two months thereafter, unless otherwise ordered by the courts.

11. Set apart the bankrupt's exemptions and report the items and estimated value thereof to the court as soon as practicable after their appointment.

Referees hold office continuously, being appointed by the courts for a term of years. Trustees, on the other hand, are appointed by the creditors to administer particular estates, and serve only during the time required to administer the affairs of a given estate.

Section 44 of the Federal Bankruptcy Act provides:

The creditors of a bankrupt estate shall, at their first meeting after the adjudication or after a vacancy has occurred in the office of the trustee, or after an estate has been reopened, or after a composition has been set aside or a discharge revoked, or if there is a vacancy in the office of trustee, appoint one trustee or three trustees

of such estate. If the creditors do not appoint a trustee or trustees as herein provided, the court shall do so.

Corporations may act as trustees, if qualified. Trust companies are usually equipped to do this kind of work.

Accounting Procedure. Since the administration of a bankrupt estate falls largely on the trustee, the accounting procedure must be devised to present a record of his activities. This procedure is similar to that already explained for receivers, since in both instances an estate is being accounted for, and perhaps liquidated.

The ledger may be divided into an estate section and a claims section, although it is not necessary, by law, to keep any record of claims, except as they are paid. The duty of certifying to whom dividends shall be paid falls on the referee. Should the trustee wish to keep a record of claims, he should see that such record agrees with records kept by the referee.

In accounting for bankrupt estates the use of the term *Preferred Creditors* should be avoided when referring to creditors entitled to priority of payment, because this expression is also used to refer to creditors who have been given a preference by the bankrupt prior to the bankruptcy proceedings.

Illustration. The Smithton Corporation has committed an act of bankruptcy and Aaron Gould has been appointed receiver to preserve the property pending bankruptcy proceedings. The company is adjudicated a bankrupt and Gould is appointed trustee to wind up its affairs. The schedules of assets and liabilities are as follows:

Assets	
Cash	2,500.00
Notes Receivable	20,000.00
Accounts Receivable	35,000.00
Land	15,000.00
Buildings	27,600.00
Furniture and Fixtures	3,000.00
Merchandise	11,700.00
	114,800.00
Liabilities	
Creditors Entitled to Priority:	
Wages	1,600.00
Taxes	2,000.00
Unsecured Creditors	330,000.00
	333,600.00

Fig. 130

A summary of the trustee's transactions follows:

Receipts:	
Balance	2,500.00
Notes Receivable Collected	15,000.00
Accounts Receivable Collected	27,000.00
Land and Buildings Sold	36,000.00
Furniture and Fixtures Sold	1,500.00
Merchandise Sold	8,000.00
	90,000.00
Payments:	
Priority Creditors	3,600.00
Legal Expenses	600.00
Referee's Costs	900.00
Trustee's Expenses	1,100.00
Dividends to Unsecured Creditors	83,800.00
	90,000.00

Fig. 131

The entry to open the estate ledger follows:

Cash	2,500.00	
Notes Receivable	20,000.00	
Accounts Receivable	35,000.00	
Land	15,000.00	
Buildings	27,600.00	
Furniture and Fixtures	3,000.00	
Merchandise	11,700.00	
Estate of Smithton Company in Bankruptcy		114,800.00

The transactions for the year are summarized in the following journal entries.

(1)		
Cash	15,000.00	
Gain and Loss on Realization	5,000.00	
Notes Receivable		20,000.00
(2)		
Cash	27,000.00	
Gain and Loss on Realization	8,000.00	
Accounts Receivable		35,000.00
(3)		
Cash	36,000.00	
Gain and Loss on Realization	6,600.00	
Land and Buildings		42,600.00
(4)		
Cash	1,500.00	
Gain and Loss on Realization	1,500.00	
Furniture and Fixtures		3,000.00
(5)		
Cash	8,000.00	
Gain and Loss on Realization	3,700.00	
Merchandise		11,700.00

(6)		
Priority Creditors	3,600.00	
Cash		3,600.00
(7)		
Legal Expenses	600.00	
Cash		600.00
(8)		
Referee's Costs	900.00	
Cash		900.00
(9)		
Trustee's Expenses	1,100.00	
Cash		1,100.00
(10)		
Dividends to Unsecured Creditors	83,800.00	
Cash		83,800.00

After the foregoing entries are posted, a trial balance of the trustee's ledger appears as follows:

Gain and Loss on Realization	24,800.00	
Priority Creditors Paid	3,600.00	
Legal Expenses	600.00	
Referee's Costs	900.00	
Trustee's Expenses	1,700.00	
Dividends to Unsecured Creditors	83,800.00	
Estate of Smithton Corp. in Bankruptcy		114,800.00
	114,800.00	114,800.00

Fig. 132

The following entry closes the trustee's books:

Estate of Smithton Corporation in Bankruptcy	114,800.00	
Gain and Loss on Realization		24,800.00
Priority Creditors Paid		3,600.00
Legal Expenses		600.00
Trustee's Costs		900.00
Trustee's Expenses		1,700.00
Dividends to Unsecured Creditors		83,800.00
To close.		

Chapter 18

LIABILITIES

Liabilities will be regarded as falling into three groups, namely: (1) current, (2) contingent, (3) fixed.

Generally speaking, current liabilities are those which mature within one year. Contingent liabilities are those which represent potential future debts which become real debts only in the event that the contingencies on which they are conditioned become real. Contingent liabilities exist only where information available at the present time indicates that future events may cause them to become actual liabilities. Fixed liabilities are those whose maturity dates fall more than one year in the future. These are illustrated by bond issues and mortgages. Detailed consideration of the three classes of liabilities follows.

Current Liabilities

Theory of Current Liabilities. The classification of debts into current, fixed, and possibly contingent is based on certain theories relative to the origin and nature of debts. Current liabilities must be paid through the conversion of merchandise into cash either directly, or indirectly through its conversion first into accounts receivable. The cash which is provided by the process of liquidating merchandise through sales must always be sufficient to pay maturing current obligations. In case of manufaeturing, the procedure is essentially the same as in case of merchandising, although the process may consume a somewhat longer period of time owing to the fact that merchandise must be manufactured before it can be sold. Naturally the debts incurred in the purchase of raw materials or merchandise should be paid ordinarily in less than a year's time from the date they are incurred, since such materials or merchandise are usually disposed of in much less than one year, thus making available the cash required for their liquidation.

It is evident that some enterprises are able to accomplish a considerable amount of financing of their purchases of raw materials or merchandise by taking advantage of the fact that there is always outstanding a considerable amount of current liabilities which in effect is a permanent debt since it is being constantly renewed. Thus, if the outstanding current liabilities average $3,000.00, it is evident that this amount of capital is being provided by the creditors of the enterprise. As long as current liabilities are paid according to the terms of the purchase agreement no objection can be made to this method of financing. In reality, the financing thus accomplished is paid for in the form of higher prices than would be paid were all purchases made on a strictly cash basis. Likewise, it is evident that where the cash discount terms are taken advantage of, the purchase price is in effect less than where the discounts are not taken. As a rule, it is more profitable to take all cash discounts and provide the additional capital required than to permit creditors to assist in financing purchases by failing to take the cash discounts which they offer.

It is evident that any satisfactory treatment of current liabilities must take into consideration the character and classification of the current assets. Consideration of the balance sheet of a given enterprise always involves the determination of its working capital position, which is the excess of the current assets over the current liabilities; also the current ratio, that is, the ratio of current assets to current liabilities, must be considered. Thus, a current ratio of 2 to 1 might or might not be satisfactory, depending upon the character and classification of both the current assets and the current liabilities. In Fig. 133 is shown the classification of current liabilities suggested in the *pro forma* balance sheet suggested by the Federal Reserve Board.

The classification of current liabilities shown in Fig. 134 should be regarded as suggestive rather than definitive for a particular enterprise. Thus under the head of *secured liabilities* there are in many instances no such items. Likewise under the head of *unsecured notes* there usually are not as many types as shown in the outline. As a rule accounts payable past due are not indicated in commercial balance sheets, although this is possibly a desirable trend. Under the head of *accrued liabilities* accruals should be separately shown,

Notes and accounts payable:
- Secured liabilities
  - Obligations secured by
    - Customers' accounts assigned to the amount of
    - Liens on inventories
    - Securities deposited as collateral
    - Other collateral
- Unsecured notes
  - Acceptances made for purchases of merchandise or raw material
  - Notes given for purchases of merchandise or raw material
  - Notes given to banks for borrowed money
  - Notes sold through brokers
  - Notes given for machinery, plant additions, etc.
  - Notes due to stockholders, officers or employees
- Unsecured accounts
  - Accounts payable for purchases (not yet due)
  - Accounts payable for purchases (past due)
  - Accounts payable to stockholders, officers, or employees

Accrued liabilities (interest, taxes, wages, etc.)
Other current liabilities (describe fully)
Total current liabilities

Fig. 133

such as interest accrued, taxes accrued, wages accrued, and so on. The setup shown in Fig. 134 is such as is found in the average actual balance sheet.

Bank overdrafts
Accounts payable (trade creditors only)
Notes payable—trade
Notes payable—miscellaneous
Accrued liabilities (wages, taxes, etc.)
Notes payable to officers, stockholders, and employees
Other current liabilities

Fig. 134

Detailed consideration of the more important types of current liabilities follows:

Bonds. Only those bonds which mature within one year and for which no sinking fund provision has been made should be transferred to the current liability section of the balance sheet. It is only where no sinking fund has been provided that working capital will be reduced through the redemption of the bonds. The reduction in the working capital occurs, not when the bonds are paid, but when they

are transferred from the fixed liability section to the current liability section of the balance. To illustrate, assume that current assets amount to $300,000.00 and current liabilities to $200,000.00, thus creating a working capital of $100,000.00. Bonds payable to the amount of $50,000.00 are transferred from the fixed liability division to the current liability division because their maturity date is less than one year in the future. This reduces working capital from $100,000.00 to $50,000.00 and this reduction in working capital will exist after the bonds have been paid off. Where arrangements are being made for the refunding of an issue of outstanding bonds there appears to be no need to transfer these to the current liability section of the balance sheet, since the refunding procedure will defer the maturity date of the bonds for another term of years.

In this connection it should be noted that where a sinking fund is established to liquidate a bond issue and where at the same time a reserve for depreciation is set up to provide for the replacement of the assets which the bonds were issued to finance, double provision is made for replacement. If a sinking fund is established the bonds should not be transferred to the current liability section, whether or not provision for depreciation is made. If, however, a sinking fund is not established the bonds should be transferred to the current liability section as they approach maturity date, whether or not a depreciation reserve is established. This is because the provision for depreciation results in an increase in working capital out of which, in the absence of a sinking fund, the liquidation of the bonds must be accomplished.

Bond Interest. As a rule, interest on bonds must be paid out of the current funds of the corporation, since provision is not made in the sinking fund for it. It is customary to show the amount of the interest accrued by making a journal entry as of the day the interest matures; thus, if a corporation has outstanding an issue of $1,000,000.00 of 6 per cent bonds the semiannual interest thereon amounts to $30,000.00. If this is due on September 1 and March 1, respectively, the entry required at either date is as follows:

Interest Expense	*30,000.00*	
Accrued Interest Payable		*30,000.00*

For amount of interest matured on 6 per cent first mortgage bonds as at Sept. 1 (or March 1).

Since it is customary to have the matured coupons handled by some independent agency, such as a trust company, it is necessary to write a check for the amount of the interest, the check being made payable to such agency. In case of the illustration already given, the entry for this check, in journal form, would be:

Accrued Interest Payable	*30,000.00*	
Cash		*30,000.00*
For payment to coupon agent to cover interest due on 1st mortgage bonds due Sept. 1 (or March 1).		

Accounts Payable. The obligations known as *accounts payable* are those which usually arise out of the purchase of raw materials, merchandise, and supplies on credit. Such debts are self-liquidating and should be distinguished from other debts which are not self-liquidating, such, for example, as debts incurred for the purchase of equipment and furniture and fixtures. Purchases of the latter type reduce the working capital because the charge is to some fixed asset account; on the other hand, the purchase of raw materials or merchandise does not affect the amount of the working capital. Accounts payable which are not self-liquidating should be shown in a separate account entitled Accounts Payable (other than trade).

In connection with the consideration of accounts payable, cash discounts require treatment. As a rule, a cash discount is a deduction of 2 per cent offered to the purchaser on condition that he pay the bill within 10 days from the date of the invoice. Thus, if A purchases goods from C, \$200.00, terms, 2 per cent, 10 days, the entry on the date the goods are received is, according to prevailing accounting procedure, as follows:

Purchases	*200.00*	
Accounts Payable .		*200.00*

When the goods are paid for, and if the discount is taken, the customary entry is:

Accounts Payable	*200.00*	
Cash		*196.00*
Discount on Purchases		*4.00*

Under this procedure the merchandise purchased is entered on the books of the buyer and the cash discount is regarded as a profit of the period in which the purchase is made. It is evident that this

procedure is not strictly in accordance with the facts. The true cost of the merchandise is not $200.00 but $196.00, the discount being a reduction from the invoice price to encourage prompt payment. Two per cent for 10 days is much in excess of any normal rate of interest, and such excess may be considered as the amount which the seller is willing to sacrifice in order to avoid the risk of carrying the account. In view of these considerations, the true character of cash discounts is illustrated in the following entries.

At time of purchase:

Purchases	*196.00*	
Discount on Purchases Allowable	*4.00*	
Accounts Payable		*200.00*

If the purchaser pays within the discount period the entry is:

Accounts Payable	*200.00*	
Discount on Purchases Allowable		*4.00*
Cash		*196.00*

If the purchaser does not take advantage of the discount the entry is:

Accounts Payable	*200.00*	
Cash		*200.00*

It is evident that discounts which the purchaser fails to take will accumulate on the debit side of the Discount on Purchases Allowable account. At the end of the accounting period the balance in this account, less whatever amount relates to purchases upon which the discount period is not yet expired, should be treated as expense.

Notes Payable. Where notes or acceptances are customarily employed in making purchases they may be an important item of the current liabilities. In other instances, notes payable may be used in borrowing from banks. As a rule, one or more of the following items of notes payable will be found in the manufacturing or commercial balance sheet: (1) trade acceptances, (2) notes issued for merchandise purchases, (3) notes sold through brokers, (4) notes discounted at bank, (5) notes issued to individuals.

Some notes are secured on specific assets, others are based simply on the issuing concern's general credit. If the amount of the note is considerable, an explanation of the security given should appear either in the balance sheet itself or in a footnote to the balance sheet. Where notes are given to banks for large sums of money

advanced by the banks in anticipation that the notes will be superseded by a bond issue, the notes thus issued are in effect long-term obligations and should be classified as such. To illustrate, assume that Corporation X plans to finance the construction of a large building by means of a bond issue, amounting to $300,000.00. In anticipation of the bond issue certain banks agree to advance to Corporation X the sum of $200,000.00 for which sum Corporation X gives its note. As soon as the bonds are sold the note will be retired. Clearly the issuing of the note is merely a forerunner of the bond issue and may be considered as a long-term obligation which will be refunded into the form of outstanding bonds.

Where large numbers of notes or acceptances are issued for the purchase of merchandise it is necessary to devise an adequate system of control. The usual scheme takes the form of a subordinate notes payable or acceptances payable ledger. Adequate records for such obligations will render possible their analysis with reference to maturity dates and the cash requirements necessary to meet them.

Accrued Items. Various types of liabilities result from what are termed accruals. Typical of accruing liabilities are interest, taxes, and wages. These will be considered briefly:

1. *Interest.* The problem of accruing interest ordinarily arises in connection with bonds payable and notes payable. As a rule, the problem is relatively simple in the case of a bond issue because the entire amount of the interest is governed by the same set of facts. In case of notes, however, the complications may be somewhat burdensome because each note must be considered separately, since it has its own date of maturity, rate of interest, and amount.

Assume that a corporation has outstanding an issue of bonds having a par value of $500,000.00 and that the coupon interest rate is 6 per cent, payable semiannually, March 1 and September 1. If the corporation closes its books at the end of the calendar year, December 31, there will be interest accrued for four months, that is, from September 1. This amounts to $10,000.00. An adjusting entry is made as follows:

Dec. 31		
Interest Expense	*10,000.00*	
Accrued Interest Payable		*10,000.00*
Interest accrued on 6 per cent bonds.		

Through the closing entries the $10,000.00 debit in the Interest Expense account is closed into the Profit and Loss account. After the books have been closed, a post-closing entry is made reversing the foregoing entry, closing the Accrued Interest Payable account, and leaving a credit balance in the Interest Expense account of $20,000.00. On March 1, interest amounting to $15,000.00 is paid. This is debited to the Interest Expense account, thus leaving in that account a debit balance of $5,000.00, which is the correct amount of interest expense for the two-months, period ended February 28.

Where the number of notes payable is large, some plan of recording them should be devised which will make it reasonably convenient to determine the amount of interest accrued. If, as suggested above, a subordinate notes payable ledger is operated, reference may be made to each note account, the accrued interest being computed on the basis recorded therein. Sometimes, in place of a subordinate notes payable ledger, a notes payable register may be operated. This is, in effect, a subordinate ledger, but having an arrangement which permits the display of a large number of notes on one double page. Naturally, the exact procedure to follow must be based on circumstances. Where several payments are made on a given note in the process of liquidating it, it may be better to open a separate account for each note in a subordinate ledger. Where it is customary to liquidate notes by single payments the notes payable register may be satisfactory.

Assume that the notes payable register contains 35 notes and that the analysis columns show total interest accrued as at December 31 amounting to $2,110.21. The adjusting entry as at December 31 is:

Interest Expense	2,110.21	
Accrued Interest Payable		2,110.21

After the books are closed on December 31, the entry is reversed, the reversal being a post-closing entry. As interest payments actually occur, the charge is always made to the Interest Expense account.

2. *Accrued Taxes.* The exact method of treating taxes must be made to depend upon the manner in which taxes are assessed and the time when payment must be made. In case of real estate, taxes are usually assessed on a calendar year basis and become payable anywhere from one to several months after the calendar year. There

are instances, however, where taxes fall due before the end of the calendar year for which they are assessed. Owing to the fact that it is impossible to determine in advance the exact amount of the taxes, it becomes necessary to base the adjusting entries for accruing taxes on an estimate. The entry may be made monthly, if monthly statements are required, or it may be made for the calendar year if the books are closed annually. Also, it may be made for the fiscal year if the accounting year is not the calendar year. The usual form of this adjusting entry is:

Taxes Expense	*75.00*	
Taxes Accrued		*75.00*
For estimated amount of taxes accruing for the month of Sept., 19—.		

This procedure would result in a total annual sum of taxes accrued of $900.00. When the actual sum is found to be $950.00, upon receipt of the tax bill, it would be necessary to charge the excess of $50.00 to Surplus account, because tax expense and therefore net profit for the preceding year was overstated by that amount.

3. *Accrued Wages.* Wages are usually paid at intervals of two weeks, or according to some other plan under which the amount of the hire accrues from pay day to pay day. Obviously, payment is not likely to occur on the closing day of the accounting period, with the consequence that there are usually several days' wages accrued but not yet payable on the closing date. Assume, for example, that the amount of wages accrued as at July 31 is $275.00. The entry is as follows:

Wages	*275.00*	
Wages Accrued		*275.00*
For wages accrued and unpaid as at July 31, 19—.		

The amount in the Wages account is closed into the Profit and Loss account, but after the post-closing entry is made there is a credit balance in the Wages account of $275.00. When, later, the actual payment of wages occurs, there will result a debit balance in the Wages account representing the true amount of wages expense of the new accounting period, from the opening day to the day the wages are paid.

Audit of Accounts Payable. Every concern which purchases large quantities of merchandise or raw materials on account must

establish some plan whereby each invoice may be checked against the goods purchased and the amount of the liability definitely ascertained, before an entry therefor is made on the records and before a check is issued in payment. This procedure is known as the auditing of the accounts payable. It is evident, however, that at the end of the accounting period it will be impossible to audit the invoices received during the last few days of the period because the goods may not be received or because of lack of time to carry out the routine of the auditing procedure. However, to omit these liabilities and to omit the amount of the goods purchased which they represent would result in a serious discrepancy in the balance sheet. Assuming that the amount of unaudited invoices as at December 31, the close of the accounting year, is $550.00, the following adjusting entry should be made to bring the information upon the books:

Inventory	*550.00*	
Accounts Payable		*550.00*
For unaudited invoices as at Dec. 31, 19—.		

After the books are closed, this entry is reversed by means of a post-closing entry. Then, in due time, the audited invoices are brought upon the books in accordance with the usual procedure of handling accounts or vouchers payable. The charge at this time is to the proper Purchases account, not to Inventory account.

Deposits on Contracts. In certain lines of business a protracted period of time is sometimes required to complete the manufacturing of a specified article. Naturally, in such cases, the outlay is likely to be large and hence the customer may be required to make deposits in advance of the date of completion of the project in order to keep to a minimum the amount of capital which the manufacturer must provide. When the customer thus helps to finance the manufacturing process, the amount which he is required to deposit in advance of the completion of the contract should be shown as a current liability, not deducted from the amount already expended on the contract. To deduct it from the amount already expended on the contract would be to obscure the facts and render incorrect the working capital ratio. To illustrate, assume that in the case of a given building contract it is provided that $5,000.00 is to be paid when the foundation is completed, another $5,000.00 paid when the roof

is on, and final payment of $5,000.00 made upon completion of the building. Assuming that the cost of construction is $11,000.00, the contractor makes a profit of $4,000.00. As each payment is reeeived by the contractor, Cash account is debited and Deposits on Contracts account is credited. The final payment of $5,000.00 may, however, be credited direct to the appropriate revenue account, say, Income from Completed Contracts account. The amounts already credited to Deposits on Contract accounts will be closed into the Income from Completed Contracts account. Following this procedure the amounts received as deposits are treated as current liabilities as long as the contract is incomplete. When the contract is complete these amounts become the equivalent of sales. Offsetting the sales income of $15,000.00 is the cost of $11,000.00. It may be observed that the amounts credited to the Deposits on Contracts account are not liabilities in the sense that they must be paid, although indirectly they will be liquidated through the transfer of title and possession of the article manufactured. They are deferred credits to income. These items, as a group, are customarily treated as current liabilities, although they are sometimes shown separately on the balance sheet.

Dividends Declared. Even though it may be the established policy of the company to declare dividends regularly, a dividend becomes an actual liability of the company only when it has been officially declared by the board of directors. Since dividends are usually declared payable in four quarterly installments, they are current liabilities; nevertheless, they are sometimes set out separately in the balance sheet. The declaration of dividends results in the reduction in working capital by the amount thereof, since the entry indicating the liability on the dividend results in a transfer from the Surplus account in the net worth division to the Dividends Payable account in the current liabilities division. The detailed treatment of dividends varies with circumstances, but it is usually desirable to make a deposit in a separate account of the entire sum required to pay the quarterly dividend. Against this account the dividend checks are written. Since some dividend checks may not be cashed, there may result an unused balance in the checking account for dividends. This should be permitted to remain until it can be eliminated, but this should be done only upon proper legal advice.

Contingent Liabilities

Nature of Contingencies. A contingency is a possible future occurrence having a causal connection with a present situation which makes possible the anticipation of the contingency. A contingent liability is one which will become an actual liability in the event that the contingency on which it is conditioned becomes an actuality. Contingent liabilities are therefore merely potential in character and may never become aetual; in fact, upon the passing of the contingency upon which they are conditioned, the possibility of their becoming actual liabilities may disappear altogether. Accidents and mishaps which can in no way be foreseen are not contingencies. In case of a contingency there is always present some information indicating that the contingency is more or less likely to become an actuality.

To illustrate the character of a contingent liability, assume that one enterprise guarantees the interest on the bonds of another enterprise. The guaranteeing company thus incurs a contingent liability which becomes actual in the event that the company for whose benefit the guaranty is made is unable to pay the interest on its bonds. Some contingent liabilities are quite remote, others are less so. Thus, if the concern whose interest payments are guaranteed is in excellent financial condition, the possibility that the guaranteeing company may be held to pay the interest is remote. If, on the other hand, the financial condition of the company whose interest is guaranteed is bad, the current liability of the guaranteeing company is much less remote.

Accounting for Contingencies. It is only natural for business men to make some provision against both accidents and contingencies. There is, however, a tendency to confuse accidents with contingencies. The provision for contingencies usually takes the form of a so-called Reserve for Contingencies account. The confusion arises in that this Reserve for Contingencies is sometimes looked upon as a reserve against accidents as well as contingencies. It is better, however, to distinguish between accidents and contingencies and to make separate provision for each. The Surplus account itself is a reserve against all accidents; therefore, when a portion of it is

reserved as a provision against contingencies, this in itself is an indication that the contingency is anticipated.

As a rule, the reserve for contingencies should be set up out of earned surplus; thus, if Company Y decides to establish a reserve for contingencies of $30,000.00, the necessary journal entry is:

Jan 27		
Earned Surplus	*30,000.00*	
Reserve for Contingencies		*30,000.00*
To make provision against anticipated contingencies per resolution of board of directors See minute book, page —.		

Certain puzzling problems arise in connection with an attempt to account accurately for contingent liabilities. Obviously, the problem of appraisal is a difficult one in many instances because the exact amount of the contingent liability is indeterminate. Because of these uncertainties, in most cases the existence of a contingency does not result in any entry on the accounting records; whereas, of course, the emergence of a debt as the result of the materialization of a contingency necessitates an entry on the books reflecting the amount of the debt. There are, however, exceptions to the general rule. Thus, in case of notes receivable discounted, the contingent liability is specifically accounted for on the books when a Notes Receivable Discounted account is credited for the amount of notes receivable discounted. This is the customary procedure today.

In general, there are three ways in which the existence of a contingent liability may be expressed, namely: (*a*) in memorandum form on the balance sheet, or (*b*) in the form of a footnote attached to the balance sheet or, (*c*) in a report accompanying the balance sheet. More specifically, we may indicate on the balance sheet the existence of contingent liabilities as follows: (1) By use of a footnote expressing the facts. (2) By showing the contingent liability in the balance sheet itself under a distinct head, such as *Contingent Liabilities*. (3) By deducting the contingent liability from the corresponding asset if such an asset exists. This is illustrated by the practice customarily followed with reference to notes receivable discounted. (4) By showing the contingent liability "short" on the liability side of the balance sheet. (5) By listing the contingent liability as a current liability and by listing the offsetting asset, if there is one, in the current asset section.

An authoritative source states: "Contingent liabilities, other than those due to specific hypothecation of current assets, should appear as footnotes on the liability side of the balance sheet."

Determining Contingent Liabilities. The determination of contingent liabilities and the estimate of the amount is oftentimes a difficult problem because of the obscurity surrounding future events. Nevertheless, the problem is one which confronts both accountant and auditor, it being the accountant's obligation to report thereon and the auditor's duty to assure himself that he has placed the best valuation possible on future contingencies. In order to secure the necessary information, it may be necessary to refer to some or all of the following sources: (1) minutes of directors' and stockholders' meetings, (2) accommodation endorsements on commercial paper, (3) purchase commitments made in periods of falling prices, (4) pending lawsuits, (5) tax matters, such as the possibility of increased assessments, (6) bonus payments based on earnings, (7) provisions in leases requiring additional expenditures in the event of certain developments, (8) guaranty of satisfactory performance of goods sold, (9) offers of rebates and offers of trade discounts, (10) provision with reference to return of goods and of containers.

The minutes of meetings of directors and stockholders should indicate plans for future activities; also reading of these minutes may show that there are still possible liabilities connected with past performances. Sometimes it is difficult to locate all accommodations and endorsements on commercial paper. Conversations with officials of the company may be helpful in this connection. Only in the event that there is a noticeable fall in prices are purchase commitments likely to be cancelled. Their cancellation, of course, will give rise to certain penalties. Conversation with the concern's attorneys should produce information relative to pending lawsuits. These occur in connection with such matters as patent infringements, the use of competitors' names, and so on. Conversation with the company's officers, and also with the proper tax authorities, should indicate whether or not there is likely to be an increase in assessments. Increases in bonus payments are likely to occur only where there are increased earnings. The company auditor or accountant should be able to throw light on this matter. In some cases, the guaranty of

satisfactory performance of goods sold is a major consideration and may involve heavy future outlay. There should be little difficulty in ascertaining a concern's policy with reference to rebates and trade discounts, but there may be considerable difficulty in estimating what effect this policy is likely to have on future earnings, and also what contingent liabilities are likely to arise in this connection.

Purchase Commitments. When a concern contracts for the future delivery of goods, there exists the possibility that loss may result from the cancellation of contracts. The facts relative to such contingent losses may be stated in a footnote to the balance sheet, or a reserve for contingencies may be set up. Also, where contracts to purchase for future delivery have been made, and where prices have fallen since such contracts were made, there exists a potential loss, measured by the amount of the drop in prices. Thus, if on December 15 a purchase commitment is made to buy for delivery on March 15, 1,000 units at $5.00 per unit, but at the balance sheet date, December 31, the price has dropped to $4.00 per unit, there exists a contingent loss of $1,000.00. If there is reason to believe that the drop in prices is permanent, the adjusting entry to make reservation for the losses is as follows:

Dec. 31		
Loss on Purchase Commitments	*1,000.00*	
Reserve for Loss on Purchase Commitments		*1,000.00*
To record decline in price on commitments for future delivery.		

At the beginning of the next period, or as of January 1, this reserve should be carried to the Purchases account as follows:

Jan. 1		
Reserve for Loss on Purchase Commitments	*1,000.00*	
Purchases		*1,000.00*
To reduce Purchases account to a present price basis.		

It should be noted that the reserve for loss on purchase commitments illustrated above is not a reservation of surplus, but in the nature of a valuation account for purchases.

Guaranties of Service. Frequently, the vendor of an article contracts to keep it in repair or to otherwise see that the article is satisfactory to the vendee. If there is on hand a sufficient amount of experience data relative to such guaranties, it may be possible to compute the contingent liability thereon with reasonable accuracy.

In such case a Service Guaranty Reserve account should be set up. This reserve should be regarded as a current liability, since the likelihood that it will be employed to effect the cancellation of losses is practically certain. It may be stated, however, that only where the liability can be ascertained with reasonable accuracy should the reserve be regarded as a liability. With reference to guaranties in the absence of fairly accurate information, the facts available should be set forth in a footnote to the balance sheet or in a report accompanying the balance sheet.

Fire Insurance. Oftentimes after a fire loss has occurred, it is found that the protection carried was inadequate and that in effect, the insured had been carrying a kind of contingent liability in the form of inadequate insurance. In this connection it may be noted that for insurance purposes present-day appraisal values are oftentimes to be preferred to original cost less accrued depreciation values. This is due to the fact that a fire loss requires immediate replacement on the basis of present-day values, whereas provision for ultimate replacement necessitated by wear and tear may appropriately be made on the basis of original cost.

Frequently fire insurance policies contain the "80 per cent coinsurance" clause. In such cases all losses from fire are paid in full by the insurer up to the face value of the property, provided that no less than 80 per cent of the value of the property is covered by insurance. If the total insurance carried is less than 80 per cent of the value of the property, the insured becomes a co-insurer. The effect of under insurance is illustrated below.

Sound Value of Property	*100,000.00*
80 per Cent Thereof	*80,000.00*
Amount of Insurance	*40,000.00*
Ratio of Insurance to 80 per Cent of Value of Property	*50 per cent*

In the foregoing illustration, the insured party is co-insurer with the insurance company to the extent of 50 per cent of all losses. Thus, in the event of a fire loss of $15,000.00, only $7,500.00 could be collected, and in the event of a fire loss of $80.00 only $40.00 could be collected. These considerations make evident the desirability of carrying adequate insurance, thus avoiding an important type of contingent liability.

Endorsements. Some of the most serious contingent liabilities arise as the result of endorsements. An endorsement may be either for the benefit of the endorser or, as in case of accommodation endorsements, for the benefit of others than the endorser. If a person acquires a negotiable instrument through endorsement he may sue, if necessary, the maker or any endorser. He should proceed first against the maker, but if he fails to collect from him he should next proceed against the last endorser, who may in turn sue any preceding endorser, and so on. In view of the foregoing consideration, as long as a note remains unpaid, any endorsement thereon constitutes a contingent liability. In connection with such contingent liability, however, there always exists a contingent asset, because the endorser who pays has the right to sue preceding endorsers as well as the maker. This asset may or may not be an adequate protection, depending upon the financial ability of previous endorsers, as well as of the maker.

Some very heavy losses have been incurred through an act of friendship, by serving as an accommodation endorser for makers of notes not having satisfactory credit standing. Sometimes, of course, accommodation endorsements are given for a consideration, but there is no connection between such consideration and the amount which the endorser may be compelled ultimately to pay if the maker fails to pay.

Fixed Liabilities

Nature of Fixed Liabilities. According to the somewhat arbitrary rule whereby liabilities falling due within one year from date are regarded as current liabilities, all other liabilities of a definite character are automatically classified as fixed liabilities. In case of companies, fixed liabilities almost invariably take the form of bonds or notes, some notes having a maturity date of as long as five years from date of issue. Bonds sometimes have maturity dates as long as fifty, one hundred, or even more years from date of issue. In the United States bonds having no date of maturity are unpopular and may be disregarded here. In case of individuals and partnerships, mortgages are frequently found having a maturity date more or less remote. There usually accompanies the mortgage a bond or

note representing the mortgagor's liability. The mortgage is the security which the mortgagor gives in connection with his bond or note. In any event, obligations of this character are shown under the balance sheet title of *Fixed Liabilities*. As a rule, in this country, the fixed liability classification follows the current liabilities in the balance sheet.

Attention has elsewhere been given to the question, whether or not when fixed liabilities approach maturity date they should be transferred to the current liability section of the balance sheet. It may be well to repeat here that the transfer should be made if the liquidation of the liability will result in a direct reduction of working capital. This will occur in the event that no special provision in the form of a sinking fund has been made for the payment of long-term debts. The decision will have to be made in view of all of the facts pertinent to the case in question.

Fixed Liabilities as a Financial Factor. Few companies are able to escape the consideration of bond issues as a means of financing additions and betterments, and even working capital. Under certain conditions, borrowing by the sale of bonds may be beneficial, because the company may borrow money at a lower rate of interest and use it in profitable undertakings to earn a high return. There is, however, an element of risk in this procedure, sometimes known as trading on the equity. The nature of the enterprise and the steadiness of its revenues and expenses are factors which cannot be disregarded in determining what may be a safe limit for bond issues. If earnings are comparatively stable, as in case of public utilities of certain kinds, relatively larger amounts may be borrowed through the sale of bonds than in the case of competitive industrial enterprises whose earnings are subject to wide fluctuations.

Chapter 19

CONSIGNMENT AND INSTALLMENT ACCOUNTING

Consignments

Explanation and Definitions. When merchandise is consigned by one party to another, the title to the merchandise remains with the consignor, that is, the one who ships the merchandise. The party to whom the merchandise is sent is known as the consignee. The consignee does not take the title to the goods, but he does take possession of them and acts as agent or broker for the consignor. The facts relative to the status of consignor and consignee are of fundamental importance because they determine the character of the accounting procedure to be followed on the records of both the consignor and the consignee.

Naturally there will be some form of contract between the consignor and the consignee, because there are certain points which would otherwise remain unsettled. This contract should specify how the shipping charges shall be paid; how storage and insurance costs shall be paid; how payment shall be made by consignee to consignor; what credit, if any, the consignee may grant to persons purchasing consigned goods; how the consignee's commission shall be determined; and how and when the consignee shall report to the consignor.

Usually the consignor pays the shipping costs and the consignee pays for insurance and storage, reimbursing himself from the first sales made of consigned goods. As to when and how consignee shall remit to consignor, practice differs. He may remit after each sale has been consummated, or he may remit monthly. In making remittances the consignee deducts all expenses incurred in connection with consignor's shipment of the goods sold, also his own commission, as well as any other deductions which may be appropriate, such, for example, as money already advanced to the consignor.

The consignee will not grant credit except with the consignor's permission. If the consignee undertakes to guarantee the acts of those who purchase consigned goods on credit, he is known as a *del credere* agent. A *del credere* agent becomes directly responsible to the consignor and therefore the consignor need not sue the debtor.

Certain terms commonly used in connection with consignment accounting may be defined at this point.

A consignment is a shipment of goods from consignor to consignee with the understanding that the consignee is to act as agent for the sale of the goods, and that in remitting to the consignor he is to deduct his commission and proper expenses. From the point of view of the consignor a consignment is a *consignment-out*. From the point of view of the consignee a consignment is a *consignment-in*. As previously stated, title to the goods remains in the consignor. The statement which the consignee renders to the consignor giving an account of his procedure with respect to the consigned goods is known as an *account sales*. The account sales should set forth all pertinent information relative to the goods of the consignor in question, such as: (*a*) quantity, description, and price of goods received, (*b*) quantity, description, and price of goods sold, (*c*) quantity, description, and price of goods still held for the consignor, (*d*) the computation of the consignee's commission, (*e*) a statement of the expenses to be deducted, (*f*) a statement of any remittances made to the consignor, (*g*) subtraction of all items deductable, thus setting forth the amount currently remitted to the consignor.

Accounting Procedure for Consignments-In. The consignee must adapt his accounting procedure to the facts relating to the goods consigned to him by the consignor. The steps which he must take into consideration are as follows: (*a*) the receipt of the goods shipped by the consignor, (*b*) the possible payment of any expenses in connection with such shipment of goods, (*c*) the sale of the goods, (*d*) the manner in which he accounts to and remits to the consignor.

a) *The Receipt of the Goods Shipped by the Consignor.* The primary consideration upon the receipt of the goods by the consignee is that they be so marked or labeled that they can readily be distinguished from the consignee's own merchandise. Also, the consignee should keep such consigned goods in a separate division of his warehouse,

in order to facilitate handling such goods, and also in order to avoid any possibility of failure of identification. Since he does not receive title to the goods he need not make any entry in his accounting records. Sometimes, however, it is customary to make a memorandum entry at this point. If such record is made it should be merely a statement that the goods have been received, together with a description of them. The method to be used in operating an account with the consignor depends upon the extent to which the consignee engages in the business of receiving goods on consignment. If consignments are received only infrequently, no special records should be devised for taking care of them. If, on the other hand, many consignments are received, a special consignments-in ledger should be provided. All accounts with consignors should be segregated in this ledger. This will, of course, require certain columns in the cash receipts journal and in the cash payments journal, since money will be received and disbursed on account of consignments. A controlling account entitled Consignments-In carried in the general ledger will serve as a control for the subordinate consignments-in ledger. Since no entry is made in the double entry records until a sale of consigned goods takes place, the entries involved are those required to record the receipt of cash from the purchaser of consigned goods and to credit the account of the consignee in the consignments-in ledger. These are considered under (*c*) below.

b) *Payment of Expenses by Consignee.* The agreement whereby the consignee receives the consignor's goods may require the consignee to pay certain expenses in connection with the shipment of the goods. To illustrate, assume that the consignee receives a shipment of merchandise from the Wholesome Products Company and that in this connection insurance, $10.00, and shipping charges of $20.00 are paid by the consignee. This will take the form of an entry in the cash disbursements records of the consignee, but here the transaction will be shown in the form of a journal entry, as follows:

May 15, 19—		
Consignments-In No. 57—Wholesome Products Co.	*30.00*	
Cash...		*30.00*
For payment of expenses in connection with Consignment No. 57 as follows: insurance 10.00; transportation charges 20.00.		

This entry, in effect, is a charge against the consignor, and remains such until it is deducted from credits to the consignor which arise as soon as sales of consigned materials are made. Should it be necessary to prepare a balance sheet while the account with the consignor is as shown above, the $30.00 charged to his account should be listed as a current asset in the balance sheet. As indicated, this charge will not be liquidated through the receipt of cash from the consignor, but will be offset against future credits which will arise upon the sale of consignor's goods.

c) Sale of Consigned Goods. As a rule, the consignee will sell the goods of the consignor for cash only. He will grant credit only if he is a *del credere* agent. Assume that on May 25 the consignee sells three vacuum cleaners at a price of $45.00 each. The entry in journal form is as follows:

May 25, 19—		
Cash	*135.00*	
Consignment-In No. 57—Wholesome Products Company...		*135.00*
For sale of 3 Acme vacuum cleaners at a price of 45.00 each.		

If the consignee's commission is 10 per cent of the sales, the entry to record the amount of commission earned is as follows:

May 25, 19—		
Consignment-In No. 57—Wholesome Products Co	*13.50*	
Commission on Consignments-In		*13.50*
Commissions earned on sale of three Acme vacuum cleaners, being 10 per cent of 135.00.		

As previously stated, it may or may not be desirable for the consignee to keep special records in connection with the handling of consignments-in. The ledger account with the Wholesome Products Company will be essentially the same whether it is kept in the general ledger or whether it is kept in a subordinate consignments-in ledger. It is simply a question of convenience in view of the amount of goods sold on the consignment plan. The ledger account, whether kept in the general ledger or in a subordinate consignments-in ledger, will be essentially as shown in Fig. 135.

d) Remitting to Consignor. The consignment account No. 57—Wholesome Products Company, shows a credit balance of $91.50, which is the amount which would be transmitted to the Wholesome Products Company if a settlement on sales already made were

Wholesome Products Company

CONSIGNMENT-IN No. 57

Description: 8 Acme vacuum cleaners

19—					19—				
May	15	Insurance . . .		10 00	May	25	3 Vacuum Cleaners Sold		135 00
		Transportation . .		20 00					
	25	Commission		13 50					

Fig. 135

effected at this time. At certain intervals it is customary for the consignee to submit to the consignor a statement of the condition of the consignor's account. At this time he may or may not remit cash to cover the net credit balance in the consignor's consignment-in account. Assuming that on May 31 the consignee accounts to the consignor, and at the same time remits a check for $91.50, the statement of the account would be as shown in Fig. 136.

In Account with

Wholesome Products Company, Consignor

May 31, 19—

Goods Received:			
May 15,	*Eight Acme Vacuum Cleaners*		
May 25,	*Three Acme Vacuum Cleaners Sold @ 45.00 . . . .*		*135.00*
Deductions:			
May 15,	*Insurance Paid . . . .*	*10.00*	
	Transportation	*20.00*	
May 25,	*Commission, 10 per Cent . . . .*	*13.50*	*43.50*
	Remittance Herewith		*91.50*

Fig. 136

When the amount of the remittance, $91.50, is posted to the Consignment-In account, No. 57—Wholesome Products Company, this account will be in balance and will remain so until some further transaction results in a debit or credit to the account. When additional merchandise is sold, credit entries will be made in the Consignment-In account and it will again be closed by charging against it commissions, any possible expenses, and the net amount remitted to the consignor. This procedure will be continued until all of the merchandise in consignment No. 57 has been disposed of.

Sometimes the consignee agrees to advance money to the consignor at the time of receipt of the merchandise from the consignor. The amount would be fixed by an agreement between consignor and consignee. This procedure does not materially affect the transaction, since title to the goods remains with the consignor. The consignee, by advancing the money, becomes a creditor of the consignor. The amount of money advanced should be charged to the Consignment-In account. Thus if the consignee agrees to advance to the Wholesome Products Company the sum of $200.00 on account of the eight vacuum cleaners, the entry on the date of receipt of the shipment would be as follows:

May 15		
Consignment-In No. 57—Wholesome Products Co............	*200.00*	
Cash		*200.00*
For advance to consignor.		

When such an advance is made, no additional remittances will be made to the consignor until the sales made exceed all charges to the Consignment-In account in question.

Accounting Procedure for Consignments-Out. When the consignor ships merchandise to a consignee, there arises a situation which requires certain treatment in the accounting records, depending upon the interpretation of the facts. It is evident that mere shipment of the goods does not materially affect the status of the consignor. He still retains title to the merchandise and he makes no profit. Strict adherence to the facts would therefore forbid crediting the sales account for any amount; however, the facts would be represented by a transfer of merchandise from inventory on hand to inventory on consignment. Sometimes, however, the procedure of crediting sales is followed, although this procedure is as a rule to be discouraged. There would be no objection to transferring the goods at cost to the proper Consignments-Out account, but it should be remembered that this does not represent a direct charge against the consignee. It simply indicates that the amount of the goods consigned, although still in the inventory of the consignor, is in the possession of the consignee who, technically speaking, acts as bailee for the goods. In law a bailee is defined as one to whom goods are intrusted for a special purpose. A bailee is of course responsible to

the bailor for the safekeeping of the goods, but he does not receive title to the goods.

The consideration of accounting procedure to be followed by the consignor will be taken up under the following heads: (*a*), shipment of goods to consignee, (*b*) receipt of consignee's remittance, together with his statement of account, (*c*) accounting for profit made on consigned goods sold, (*d*) treatment of advances received from consignee.

a) *Shipment of Goods to Consignee.* The simplest procedure for the consignor is to treat goods shipped on consignment in the same manner as sales. When this is done no special treatment is required. Of course, some detailed record of the amount shipped to each consignee will have to be kept, in order that the exact status of each consignment may be known and in order that upon the receipt of account sales from various consignees the proper notations may be made in the records which relate to the individual shipments.

Since it is technically incorrect to regard goods consigned as having been sold, the preferable plan of handling goods consigned out is to make a memorandum entry either in the general ledger or in a special consignments-out journal, debiting consignments-out and crediting sales at the time the merchandise is shipped. For example, suppose that a merchant consigns goods to Jones and Son, the cost of these goods being \$125.00, and the shipment being made on May 2, 19—. The memorandum entry is as follows:

May 2, 19—		
Consignment-Out No. 25—Jones & Son	*125.00*	
Consignment Sales		*125.00*
For goods sent to Jones & Son on consignment.		

When the goods out on consignment are sold the foregoing entry is reversed. Consequently, its only use is to record certain information relative to the consigned goods. The actual sale of the goods will require an entry in the books treating the sale in essentially the same manner as any other sale, except that a Consignment Sales account should be credited, and, where the amount of goods shipped on consignment is large, a special consignment sales record should be kept, or at least a special column should be provided for consignment sales in the cash receipts journal if consigned goods are sold

only for cash. An examination of the memorandum consignments-out journal will at any time indicate the amount of goods out on consignment not yet sold. Since the amount of such goods is entered in the consignments-out journal at cost, the amount of the inventory in the form of goods consigned out can easily be ascertained at the end of the accounting period. It may at that time be desirable to make an adjusting entry debiting Inventory of Goods on Consignment account and crediting Inventory account. Assume that an examination of the consignments-out journal shows that goods out on consignment total $975.00. The adjusting entry in closing is as follows:

Dec. 31, 19—		
Inventory of Goods on Consignment	*975.00*	
Inventory		*975.00*
To show goods consigned but not sold in a separate account.		

If, at the time goods are shipped on consignment, expenses are paid by the consignor, these should be charged to a Consignments-Out Expense account. Thus if an expenditure of $27.80 is made for express charges the entry would be:

Consignment-Out Expense	*27.80*	
Cash		*27.80*
For shipping costs on Consignment-Out No. 25.		

b) *Receipt of Consignee's Remittances, Together with His Statement of Account.* As has been shown, the statement of account or account sales sent by the consignee to the consignor gives detailed information relative to goods received and deductions made. Referring to Fig. 136, in which the account sales remitted to the Wholesome Products Company is presented, the journal entry which is required on the books of the Wholesome Products Company, upon receipt of the account sales and check for $91.50, is as follows:

Cash	*91.50*	
Insurance Expense	*10.00*	
Shipping Expense	*20.00*	
Commission Expense	*13.50*	
Consignment Sales		*135.00*
To record data relative to Consignment-Out No. 57, as shown by account sales received.		

If the consignor carries goods out on consignment in a separate Inventory account, it will be necessary to make an adjustment for

the amount of goods sold on consignment. The exact manner of doing this will depend on conditions. It may be done at the end of the month for the entire amount of goods sold on consignment during the month, or it may be done at the time of receipt of each account sales. Thus, in case of the preceding illustration, if the cost of the three Acme Vacuum Cleaners, which were sold for $135.00, was $75.00, the entry to make the necessary inventory adjustment would be as follows:

Cost of Goods Sold	*75.00*	
Inventory of Merchandise on Consignment		*75.00*
To transfer cost of three Acme vacuum cleaners.		

c) Accounting for Profit on Consigned Goods Sold. Here there are certain alternatives. For example, it may not be necessary to compute the profit on consigned goods sold separately from the profit on other sales. On the other hand, separate accounting for profit on consigned goods may be necessary. It appears, however, that it will in any event be necessary to distinguish expenses incurred in connection with consignments from other expenses, for the reason that only that part of such expenses which is applicable to consigned goods sold during the period can be treated as current expense. That part of the expenses which is applicable to goods consigned but not yet sold must be treated as a deferred charge applicable to the following period or periods. Thus, referring to page 330, it is evident that only three-eighths of the expense incurred in connection with sales of goods for the account of the Wholesome Product Company is thus far an actual expense. The remaining five-eighths of this expense should be deferred and charged off in the period in which the sale of the five remaining vacuum cleaners occurs. The adjusting entry on the books of the Wholesome Products Company at the end of the current period, necessary to defer five-eighths of the expense, is as follows:

Dec. 31		
Prepaid Expense on Consignments-Out	*18.75*	
Insurance Expense		*6.25*
Shipping Expense		*12.50*
To defer prepaid expenses on Consignments.		

This entry should be reversed as of the beginning date of the following period.

Except for this adjustment for expenses applicable to sales not yet made, the process of determining profit differs in no way from the usual process of closing the books. The consignment sales are included in the regular sales account. The cost of goods sold, as applicable to consignment sales, will not be distinguished from cost of goods sold applicable to other sales. Similarly, the expenses applicable to consignment sales after being properly adjusted as indicated above, will be included in the regular expense accounts.

If it is desired to determine profit made on consignment sales as distinguished from profit made on other sales, it will be necessary to keep separate accounts for sales made on consignment, cost of goods sold on consignment, and expenses applicable to consignment sales. Also, it may be necessary to make an allocation of expenses of a general character which benefit both the consignment sales business and the regular sales business. When a shipment of goods is made on consignment,the cost of the goods shipped should be transferred to an account entitled Inventory of Merchandise on Consignment. Assuming that this is $150.00, the journal entry to record it is as follows:

May 4		
Inventory of Merchandise on Consignment.................	*150.00*	
Finished Goods Inventory.........................		*150.00*
Cost of goods shipped to North Products Co. on Consignment-Out No. 33.		

If any expenses are paid by the consignor in connection with a shipment of goods, an entry must be made therefor. Thus if, in connection with the preceding transaction, the consignor pays $28.00 shipping charges, the entry is as follows:

May 4		
Consignment-Out—North Products Co...................	*28.00*	
Cash...		*28.00*
For shipping charges on Consignment-Out No. 33.		

Upon receipt of account sales from consignee, an entry is required. Assume, in case of the preceding consignment, that the account sales indicates that the entire shipment of goods has been sold for $250.00, that the expenses incurred in connection therewith by the consignee amounted to insurance $10.00, and commissions $25.00, and that the remittances to the consignor amounted to

$215.00. The entries on the consignor's books, assuming that the account sales is received on May 26, are as follows:

May 26		
Cash	*215.00*	
Consignment-Out No. 33—North Products Company (Insurance)	*10.00*	
Consignment-Out No. 33—North Products Company (Commissions)	*25.00*	
Consignment-Out No. 33—North Products Company		*250.00*
For account sales Consignment-Out No. 33—North Products Company.		
May 26		
Consignment-Out No. 33—North Products Company	*150.00*	
Inventory of Merchandise on Consignment		*150.00*
To transfer cost of goods sold.		

The Consignment-Out account No. 33, in "T" form, now appears as follows:

Consignment-Out No. 33

Cost of Goods	*150.00*	*Selling Price*	*250.00*
Shipping Costs	*28.00*		
Insurance	*10.00*		
Commissions	*25.00*		

The credit balance is $37.00, which represents the profit made on this particular consignment. Along with profits or losses on consignments-out it should be closed to Profit and Loss, after which the account will appear:

Consignment-Out No. 33

Cost of Goods	*150.00*	*Selling Price*	*250.00*
Shipping Costs	*28.00*		
Insurance	*10.00*		
Commissions	*25.00*		
Profit and Loss	*37.00*		
	250.00		*250.00*

Installment Accounting

Nature of Installment Sales. Installment selling has had its chief development in this country during the last thirty years, although it was employed to some extent in the nineteenth century. Its chief development recently has been in connection with the sale of such articles as radios, washing machines, and automobiles. The importance of the subject has justified giving considerable attention

to the development of methods of recording installment sales. The consideration of a concern's installment business is essential to the preparation of the budget, in particular the cash budget. This is because selling on the installment plan tends to tie up the cash resources of an enterprise, and careful analysis of estimated future collections is necessary in attempting to forecast the cash position of an enterprise. The computation of the income tax necessitates careful consideration of installment sales with reference to the determination of profit and the allocation of such profit to the proper accounting period. A merchant may report all of his income on installment sales in the period in which the sales are made, or he may prefer to report his income as collections on installment sales are received.

There are different theories as to the time when profit on installment sales is realized. One is to the effect that the first installments represent profit, and the balance of the installments a return of the cost of the goods sold. There appears to be little justification for the application of this theory. Another theory is to the effect that the profit is realized only after the cost of goods sold has been returned through the earlier installments. This is undoubtedly the most conservative of the various theories. The third theory which requires mentioning here, is to the effect that each installment represents a proportionate part of cost of goods sold and a proportionate part of profit. Thus if goods costing $100.00 are sold for $150.00 on the installment plan, two-thirds of each installment will represent a return of cost of goods and one-third of each installment will represent profit. It may be worth mentioning that in some cases merchants prefer to take the profit on installment sales the same as on ordinary charge sales, that is, by assuming that the profit is made in the period in which the sale is made whether or not any installments are received within such period.

Accounting Procedure. In practice, there is great latitude in the accounting procedure followed in connection with installment sales. This is because of variations in types of merchandise sold as well as differences in basic features in accounting systems. Some merchants require considerable analysis of merchandise handled, others do not make such distinctions. Some merchants operate on

the plan of taking inventory periodically, other merchants prefer to use a perpetual inventory. These differences in procedure will naturally be reflected in the accounting forms involved. Some of the principles involved will be illustrated in a series of journal entries.

Assume that on February 1, 19—, a merchant sells goods which cost $400.00 to John Smith for $800.00, payable $100.00 down and the balance in 14 monthly installments of $50.00 each. If the merchant operates on the basis of a periodic inventory, the entry at the time of sale is as follows:

Feb. 1, 19—		
Cash	*100.00*	
Installment Contracts Receivable	*700.00*	
Installment Sales		*800.00*
For sale to John Smith on terms of 100.00 down, balance in 14 monthly payments of 50.00 each.		

If the merchant keeps a perpetual inventory he will know what the cost of each article sold is by referring to his inventory records. Since the cost of this article is assumed to be $400.00, the entry at the time of sale should clear the inventory records of the cost of the article. The same procedure should be followed in connection with all sales of merchandise on the installment plan. The journal entry would be as follows:

Feb. 1, 19—		
Cash	*100.00*	
Installment Contracts Receivable	*700.00*	
Inventory		*400.00*
Unrealized Gross Profit on Installment Sales		*400.00*
For sale to John Smith on terms of 100.00 down, balance in 14 monthly payments of 50.00 each.		

Since 50 per cent of each dollar received represents realized gross profit, and since it is here assumed that profits are realized as collections are made, the following entry should be made:

Feb. 1, 19—		
Unrealized Gross Profit on Installment Sales	*50.00*	
Realized Gross Profit on Installment Sales		*50.00*
For profit realized on receipt of 100.00 from John Smith.		

In practice, it may be undesirable to make a separate journal entry each time there is a realization of gross profit; instead, it may be preferable to wait until the end of the year to make the adjusting

entry necessary to transfer the gross profit on installment sales realized during the year from the Unrealized Gross Profit on Installment Sales account to the Realized Gross Profit on Installment Sales account. There will, of course, remain a credit balance in the Unrealized Gross Profit on Installment Sales account at the end of the year. This will be shown in the balance sheet as a deferred credit in the current liabilities division. The balance in the Realized Gross Profit on Installment Sales account will be closed into the Profit and Loss account. Here the exact procedure will vary. Some concerns may desire to set up a separate Profit and Loss account in connection with installment sales, and also a separate Profit and Loss account for other sales and transactions. This procedure, however, would require considerable work in the allocation of expenses applicable to installment sales, as distinguished from expenses applicable to other activities.

Repossessions. Certain complications arise in installment accounting because of the practical certainty that some customers will be unable to make all payments, in which case repossession of the merchandise becomes necessary. As soon as an article is repossessed, it must be given a value. This value should be a conservative one, taking into account not only the present market value of similar articles, but also the depreciation that has taken place in connection with the article's use. State laws must be considered in connection with the procedure involved in repossession and resale. Thus in some states there is statutory provision to the effect that upon resale of an article the merchant must pay to the original purchaser whatever amount the resale realizes in excess of the unpaid balance on the contract. In other states the defaulting purchaser loses all claim to the article and the merchant is entitled to whatever sum he may be able to secure on its resale.

To illustrate the procedure in connection with repossession of merchandise, assume that on February 1, 19—, a merchant sells a washing machine which cost \$50.00 to Henry Adams for \$100.00. Adams made a down payment of \$30.00 and agreed to pay the balance in 7 monthly installments of \$10.00 each. Adams paid 2 installments on March 1, and April 1, but on May 1, defaulted. Later in the year the machine is repossessed. As the foregoing facts indicate,

there remained $50.00 still uncollected on the account. The profit already realized amounted to $25.00, and the unrealized profit also amounted to $25.00.

Assuming that the repossessed washing machine was valued at $25.00, the entry at time of repossession on November 15 was as follows:

Nov. 15		
Repossessed Washing Machine	*25.00*	
Unrealized Profit on Installment Sales	*25.00*	
Loss on Repossession	*20.00*	
Installment Contracts Receivable		*70.00*
For repossession of washing machine sold to Henry Adams.		

Had the washing machine been valued at $60.00 instead of $25.00, a profit would have resulted on the repossession, and the entry would have been as follows:

Nov. 15		
Repossessed Washing Machine	*60.00*	
Unrealized Profit on Installment Sales	*25.00*	
Profit on Repossession		*15.00*
Installment Contracts Receivable		*70.00*
For repossession of washing machine sold to Henry Adams.		

Resale of Repossessed Goods. Experience shows that the profit on the resale of repossessed goods is much less than the profit on the sale of new goods. For this reason it is usually desirable to keep a separate Sales account for sales of repossessed goods. Unless this is done, the showing of gross profit will not be indicative of results secured from either type of sales. It is necessary to illustrate two cases, namely: (1) the procedure involved where no requirement in the laws of the state exists relative to the return of the excess of the resale price over the unpaid balance of the contract, and (2) the procedure where the state laws require that such excess be paid to the defaulting purchaser.

1. If a perpetual inventory is not kept and if a repossessed washing machine is sold for $40.00, terms $5.00 down and monthly payments of $5.00, the entry is as follows:

Jan. 15		
Cash	*5.00*	
Installment Contracts Receivable	*35.00*	
Repossessed Sales		*40.00*
For sale of repossessed washing machine.		

If a perpetual inventory is kept and the washing machine is carried at $25.00 in the inventory, the entry would be as follows:

Cash	*5.00*	
Installment Contracts Receivable	*35.00*	
Inventory		*25.00*
Gross Profit on Repossessed Articles		*15.00*
For sale of repossessed washing machine.		

2. If the laws of the state in which the dealer resides require that the net profit on the resale be paid to the original purchaser, the entry for the resale of the washing machine would be as follows:

Cash	*5.00*	
Contracts Receivable	*35.00*	
Inventory		*25.00*
Selling Expenses		*5.00*
John Smith		*10.00*
For sale of repossessed washing machine, and to credit John Smith, original purchaser, with profit on resale.		

The payment of $10.00 due to John Smith will be made after all collections have been made on account of the resale of the washing machine.

Treatment of Unrealized Gross Profit. Under the accounting procedure for installment sales explained above, the unrealized gross profit on installment sales must appear in the balance sheet. It becomes realized income when the cash collections on the installment contracts receivable are made. Since the great majority of all installment contracts receivable will be paid as the installments fall due, it is evident that the deferred profit is in the nature of net worth, and for this reason it should appear in the net worth section of the balance sheet. It is different from the usual item labeled "deferred credit to income" for the reason that before such deferred credit can be realized additional services will be performed. For example, the deferred credit in the form of magazine subscriptions is not earned until the term for which the subscriptions are paid up expires. The same is true of rents received in advance. The service to be performed consists of the use of the rented property. In the case of installment sales the only step between unrealized profit and realized profit is the collection of the amount of each installment as it falls due.

Chapter 20

APPLIED MATHEMATICS

Percentage. Under the decimal system of enumeration percentages are the most satisfactory means of making quantitative comparisons. Among comparisons which business men and accountants are required to make are costs of doing business in different years, sales in different years, the ratio of interest to the principal sum, discounts as related to the principal sum of invoice prices, commissions as related to the amount of the sale on which they are computed; in brief, percentages constitute a kind of language of comparisons, and in business and finance their use is constant.

When percentage is referred to, it means a given number of 100ths of a specified quantity or amount. Thus, 6 per cent of \$700.00 is 6/100 of \$700.00, which is computed as follows:

$$6/100 \times \$700.00 = \$42.00$$

100 per cent of any quantity is that quantity or amount. For example, 100 per cent of \$500.00 is \$500.00; 200 per cent of \$500.00 is \$1,000.00; 162 per cent of \$500.00 is $162/100 \times \$500.00 = \$810.00$. This may be computed by a somewhat different method, as follows:

$$\begin{array}{r} 1.62 \\ 500 \\ \hline \$810.00 \end{array}$$

A percentage of a number is a fraction of that number. Sometimes, when two numbers are known, it is desired to find what percentage one number is of the other. Thus, if 8 and 16 are under consideration, it may be said that 8 is 50 per cent of 16, or it may be said that 16 is 200 per cent of 8. To find out what per cent 8 is of 16 it is necessary to divide 8 by 16, thus:

$$16\,\underline{\big|\,8.0}\quad .5$$

The decimal, .5, means the same as 50 per cent. To find out what per cent 16 is of 8 it is necessary to divide 16 by 8, thus:

$$8\overline{)16.}$$
$$2.$$

In this case, 2 means the same as 200 per cent. Frequently, in considering investments, it is desirable to compute the rate of return which a given investment yields. Thus, if an investment of \$800.00 yields a return of \$50.00 annually, the rate of return is found by dividing \$50.00 by \$800.00, which gives .0625, which means 6.25 per cent. In computing percentages, it is necessary to reduce the percentage to a decimal in order to effect the division or multiplication, as the case may be. In reality, percentages are simply decimal fractions. Thus, if it is desired to find out what 10 per cent of \$628.00 is, it is necessary to effect the multiplication as follows:

$$\$628.00 \times .1 = \$62.80$$

To summarize, in percentage three quantities are involved, namely, (*a*) the *base*, (*b*) the *rate*, (*c*) the *percentage*. The percentage is computed upon the *base*.

When the percentage is expressed as a decimal it is termed the *rate*. Taking the given percentage of the base gives a result known as the percentage. When any two of the three quantities are given the third may be found.

Interest and Discount. Interest is money paid for the use of money. The amount of the loan is termed the *principal*, and the percentage of the principal sum paid each period is termed the *rate of interest*. The rate of interest is usually expressed on a per annum basis, even though the loan is for a shorter period. If a loan for \$100.00 for 4 months is secured at 6 per cent, this means 6 per cent on a per annum basis, which would be only 2 per cent for 4 months. Two per cent of \$100.00 is \$2.00. It is evident, therefore, that in a given case the amount of interest depends on the principal, the rate of interest, and the length of time.

The time may be expressed in years, in months, in days, or in a combination of these. When the time is expressed in days, there are two possible methods of computing the interest. One method is to

assume that there are 360 days in the year. This is known as the 360-day method. The other method of computing interest is to take 365 days to the year, which results in what is known as exact interest.

To illustrate, assume that the interest on $300.00 for 36 days at 5 per cent is to be computed by both methods. Under the 360-day method the interest amounts to:

$$\$300.00 \times .05 \times 36/360 = \$1.50$$

Under the 365-day method the interest amount is computed as follows:

$$\$300.00 \times .05 \times 36/365 = \$1.48$$

Discount is interest which is deducted at the time the loan is made. It occurs chiefly in connection with bank loans. Thus if one discounts a $1,000.00 note at 6 per cent for three months, he receives $985.00. The difference of $15.00 is discount. The entry on the books of the person who discounts the note is:

July 1		
Cash	*985.00*	
Discount	*15.00*	
Notes Payable		*1,000.00*
Note due in 3 months, discounted at bank.		

In interest computations three factors are involved, namely, the principal sum, the rate of interest, and the length of time involved. If p is the principal sum, r is the rate of interest, and t is the time involved, the amount of interest represented by i is found by the following formula:

$$i = p \times r \times t$$

A convenient method of procedure is to find the interest at 6 per cent for one day; then the amount of the interest for a given number of days at the given rate of interest can be readily computed. Suppose, for example, it is desired to find the interest on $100.00 for 60 days at 8 per cent. The interest on $1.00 at 6 per cent for one day is found thus:

$$i = \$1 \times 6/100 \times 1/360 = \$1/6000$$

This means that the interest on $1.00 for one day at 6 per cent is 1/6000 of $1.00. The general rule therefore is as follows: To find the

interest on any sum at 6 per cent for one day, divide that sum by 6000. This procedure is accomplished by shifting the decimal three places to the left and then dividing by 6. For example, the interest on \$7,200.00 for one day at 6 per cent is found by shifting the decimal three places to the left, which gives \$7.20. Dividing \$7.20 by 6 gives \$1.20. Since the requirement is to find the interest on \$7,200.00 at 8 per cent for 60 days the following procedure is in order:

$$\$1.20 \times 8/6 \times 60 = \$96.00$$

Compound Interest. In case of simple interest, the rate is computed only on the original principal. Thus, the interest on \$1.00 for one year at 6 per cent is \$.06, and on \$1.00 for 5 years is \$.30. In compound interest computations, the interest which has been earned during the period is added to the principal, so that at the beginning of the second period a larger principal exists than at the beginning of the first period. This increment in the principal takes place at the end of each period, with the result that the accumulative growth of the principal sum is quite rapid. Technically, the interest at the end of each period is said to be converted into principal. The period of conversion may be of any length, such as the month or the year. The rate of interest is stated with respect to the length of the period. Thus, it may be said that a given sum of money is set aside to accumulate at compound interest. The interest being compounded or converted semiannually at the rate of 3 per cent. This is not the same as interest compounded annually at the rate of 6 per cent, since the more frequently the compounding occurs the more rapid is the growth of the principal.

To illustrate the difference between simple and compound interest, assume that both simple and compound interest are to be found on \$400.00 for 4 years at 6 per cent. The simple interest is found as follows:

$$\$400.00 \times .06 \times 4 = \$96.00$$

The formula for finding the compound amount for any sum at any rate of interest for any given number of periods is as follows:

$$a = p \times (1 + i)^n$$

In the foregoing formula p is the beginning principal, i is the interest rate per period and n is the number of periods. Thus, if it is desired to secure the amount of \$400.00 accumulating over four periods at 6 per cent, the operation of the formula is as follows:

$$a = \$400.00 \times (1 + .06)^4 = \$504.99$$

The compound interest, if interest is compounded annually, is computed as follows:

Principal	\$400.00
Interest at 6 per cent	24.00
New Principal	\$424.00
Interest at 6 per cent	25.44
New Principal	\$449.44
Interest at 6 per cent	26.97
New Principal	\$476.41
Interest at 6 per cent	28.58
New Principal	\$504.99

Annuities. An annuity is a series of payments made at equal intervals of time, and usually consisting of equal amounts. The periodic payments are sometimes called rents. Ordinary rents on property, when paid monthly or at other regular intervals, constitute an annuity. Similarly, the coupons attached to a bond result in an annuity, since they represent equal amounts payable at equal intervals of time.

An ordinary annuity is one in which the first payment is made at the beginning of the first period. There are various practical applications of the theory of the annuity. Thus, one may purchase an annuity, the payments of which are to be deferred. For example, if at the age of 40 one purchases an annuity deferred until age 65, he will receive his first payment when he reaches the age of 65. The annuity may then continue for the rest of his life, or it may be provided that it shall continue only for a definite number of periods, in which case it may or may not continue beyond the date of his death.

Two basic problems arise in connection with the consideration of annuities, namely: (*a*) ascertaining the sum to which a series of payments will accumulate and (*b*) ascertaining the present value of a series of payments.

Amount of an Ordinary Annuity. Assume that equal annual payments are to be made into a sinking fund to accumulate at 4 per cent per annum, as follows:

December 31, 1936	*200.00*
December 31, 1937...	*200.00*
December 31, 1938	*200.00*
December 31, 1939...	*200.00*

It is required to compute the amount to which these payments will accumulate at December 31, 1939. This amount will be the sum of the four payments of \$200.00 each, plus the interest earned by each payment. The amount to which each payment will accumulate and the total accumulation of all payments is shown in the following tabulation:

Date	Payment	Years to Accumulate	Amount of 1.00 at 4 per Cent	Amount of 200.00
Dec. 31, 1936	*200.00*	*3*	*1.124864*	*224.97*
Dec. 31, 1937.............	*200.00*	*2*	*1.0816*	*216.32*
Dec. 31, 1938.............	*200.00*	*1*	*1.04*	*208.00*
Dec. 31, 1939.............	*200.00*	*0*	*1.00*	*200.00*
				849.29

$A_n = .16996256 \div .04 = \$4.246464$, which is the amount of an annuity of \$1.00 for 4 periods at 4 per cent; $\$4.246464 \times 200 = \$849.29$, the amount of annuity of \$200.00.

Books are obtainable which contain annuity tables. By reference to an annuity table, the amount of an annuity of one for a specified number of periods at a given rate of interest may be determined. Thus, the annuity of one for 7 periods at 3 per cent is 7.662462. If it is desired to secure the amount of an annuity of \$50.00 for 6 periods at 3 per cent, this may be found by multiplying \$50.00 by the amount of an annuity of 1, as follows:

$$\$50.00 \times 7.662462 = \$383.1231$$

If A equals the amount of an ordinary annuity, n equals the number of periods, I equals the compound interest, and i equals the interest rate, A, the amount, may be found by application of the following formula:

$$A_n = I \div i$$

Amount of an Annuity Due. In the case of an ordinary annuity the rents or payments are due at the ends of the periods. For this reason the last payment earns no interest and no interest is earned after the last payment is made. In case of an annuity due, the last payment, or rent, is paid at the beginning of the last period. Hence, all the payments, including the last, as well as all interest accumulated at the beginning of the last period, earn interest for one more period. This difference between an annuity due and an ordinary annuity makes necessary a slight change in the formula. Whereas the formula for finding the amount of an ordinary annuity is:

$$A_n = (I \div i)$$

The formula for finding the amount of an annuity due is:

$$A_n = (I \div i) \times (1 + i)$$

This amounts to first finding the amount of an ordinary annuity and then multiplying this by the ratio of increase which is:

$$(1 + i)$$

To illustrate, it is required to find the sum to which four equal payments of \$200.00 each will accumulate one year after the last payment is made. In the illustration of the ordinary annuity it was found that 4 equal payments of \$200.00 each, accumulating at 4 per cent, will amount to \$849.22 on the day the last payment of \$200.00 is made. The ratio of increase is \$1.04.

$$\$849.22 \times \$1.04 = \$883.26$$

To apply the formula the amounts may be substituted as follows:

$$A_n = (.16996256 \div .04) \times \$1.04 = \$4.41632256$$

\$4.41632256 is the amount of an annuity due of one for 4 periods at 4 per cent. This multiplied by \$200.00 gives \$883.26, which agrees with the amount shown above, secured by multiplying the amount at the beginning of the last period by the ratio of increase.

Present Value of an Annuity. The amount which must be invested at a given rate of interest to produce an annuity of a specified number of payments is known as the present value of the annuity. The amount so invested is increased by interest earned thereon and

decreased by the installments paid therefrom. The amount remaining at the date of the last payment should be exactly equal to the last payment. For example, it may be desired to find what sum of money invested at 4 per cent per annum will produce 4 annual payments of $200.00 each, if the investment is made one year before the first payment falls due. One method of determining the amount is to compute the present value of each of the 4 payments, and then find the sum of these present values. This sum will be the present value of the annuity. The procedure is illustrated below:

Payment Due	Amount of Payment	Years Interest Earned on Payment	Present value at 4 per cent
Dec. 31, 1936	*200.00*	*1*	*192 30769*
Dec. 31, 1937	*200 00*	*2*	*184.91124*
Dec. 31, 1938	*200.00*	*3*	*177.79926*
Dec. 31, 1939.	*200.00*	*4*	*170 96082*
			725.97901

In the foregoing table the computations are made by dividing the amount of the first payment by the ratio of increase, which is $1.04. The amount thus secured is in turn divided by the ratio of increase to find the present value of the second payment and so on. These computations are shown below:

$$\$200.00 \div 1.04 = \$192.30769$$
$$\$192\ 30769 \div 1\ 04 = \$184\ 91124$$
$$\$184.91124 \div 1.04 = \$177.79926$$
$$\$177.79926 \div 1.04 = \$170.96082$$

These laborious computations may be avoided by employing the following rule to compute the present value of an annuity of one for a stated number of periods at a stated rate of interest: *divide the compound discount on one for the stated number of periods at the stated rate of interest by the rate of interest.* This may be expressed as a formula as follows:

$$P_n = D \div i$$

Substituting in the formula:

$$P_n = \$29.03918 \div .04 = \$725.979 +$$

Present Value of an Annuity Due. Where the payments are made at the beginning of each period, a larger sum must be invested than

where the payments are made at the end of each period. Consequently, if the present value of an ordinary annuity for a given number of periods is known, the present value of an annuity due may be computed by multiplying the present value of an ordinary annuity for a given number of periods at the given rate by $(1+i)$. Thus, if the present value of an ordinary annuity of $200.00 for 4 periods at 4 per cent is $725.97901, the present value of an annuity due for 4 payments of $200.00 each at 4 per cent per period is computed as follows:

$$\$725.97901 \times 1.04 = \$755.01817$$

Sinking Funds. It is sometimes necessary to determine what sum must be set aside periodically, to be allowed to accumulate at compound interest at a given rate, in order to provide an amount sufficient to pay a specified principal amount at a specified future date. The payments into the fund, plus the interest accumulations, constitute what is usually known as a *sinking fund.*

For example, what sum must be set aside at the end of each year, for 5 years, to provide for the liquidation of a debt of $1,000.00 at the end of the fifth year. Interest is at 4 per cent per annum.

1st payment	184.63
Add interest at 4 per cent	7.39
	192.02
2d payment	184.63
	376.65
Add interest at 4 per cent	15.07
	391.72
3d payment	184.63
	576.35
Add interest at 4 per cent	23.05
	599.40
4th payment	184.63
	784.03
Add interest at 4 per cent	31.36
	815.39
5th payment	184.63
	1,000.02

The payments into the fund comprise an ordinary annuity, since the last payment is made when the $1,000.00 is required for payment of the debt. Reference to an annuity table shows the

amount of an ordinary annuity of 1, at 4 per cent for 5 periods to be 5.41632256. Dividing $1,000.00 by 5.41632256 gives $184.63. Therefore, if $184.63 is invested at the beginning of each year to accumulate at 4 per cent compound interest, there will be in the fund at the beginning of the 5th year, when the last payment of $184.63 is made, the sum of $1,000.00, as shown by the preceding computation.

Average Due Date. The terms of sale determine the due date for the transaction in question. Thus, if a merchant sells $100.00 worth of goods, terms 30 days net, the date when payment must be made to avoid interest penalty may be computed by counting 30 days from the date of sale. Sometimes, it is required to determine the date when settlement should be made for two or more items of different amounts and having different maturity dates. Assume that a merchant makes the following sales to R. A. Lott:

July 3	*25.00—30 days*
July 20	*10.00—30 days*
Aug. 7	*70.00—60 days*

On what day should Lott make payment to settle for all three items in order to avoid interest penalty?

It is necessary to assume a *focal* date. This may be any date, but preferably it is the earliest due date, or the latest due date. The computation, using the earliest due date, is shown in Fig. 137.

Due Date	Days	Amount	Product
Aug. 2	*Focal Date*	*25.00*	......
Aug. 19	*17*	*10.00*	*170.00*
Oct. 6	*65*	*70.00*	*4,550.00*
Totals		*105.00*	*4,720.00*

$4,720.00÷$105.00=45 days after the focal date, or Sept. 16.

Fig. 137

The method of computation, using the latest due date as the focal date, is shown in Fig. 138.

Due Date	Days	Amount	Product
Aug. 2	*65*	*25.00*	*1,625.00*
Aug. 19	*48*	*10.00*	*480.00*
Oct. 6	*Focal Date Oct. 6*	*70.00*	
Totals		*105.00*	*2,105.00*

$2,105.00÷$105.00=20 days before the focal date, or September 16.

Fig. 138

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